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PROCEEDINGS
OF THE
CONFERENCE OF AMERICAN MAYORS
ON
PUBLIC POLICIES AS TO MUNICIPAL
UTILITIES

The Annals

VOLUME LVII - 59

JANUARY, 1915

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AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
36TH AND WOODLAND AVENUE
PHILADELPHIA
1915

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EUROPEAN AGENTS

ENGLAND: P. S. King & Son, 2 Great Smith St., Westminster, London, S. W.
FRANCE: L. Larose, Rue Soufflot, 22, Paris.
GERMANY: Mayer & Müller, 2 Prinz Louis Ferdinandstrasse, Berlin, N. W.
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PROCEEDINGS OF THE CONFERENCE OF AMERICAN
MAYORS, NOVEMBER 12-14, 1914

REMARKS AT RECEPTION THURSDAY EVENING,
NOVEMBER TWELFTH

MR. EDWARD B. SMITH, of Edward B. Smith & Company, Philadelphia:

Ladies and Gentlemen: His Excellency, the Governor of Pennsylvania, has expressed his sincere regret that an official engagement prevents his being here to welcome you, but we have with us tonight a man whom Pennsylvania delights to honor. He has been mayor of Philadelphia and governor of Pennsylvania; he has the confidence, affection and esteem of all our citizens regardless of party. Whenever there is need of a man of force, of the highest integrity and ability, and of unswerving loyalty to the highest standards, our thought turns to the Hon. Edwin S. Stuart, one time mayor of Philadelphia; one time governor of Pennsylvania. I wish to present to you the Hon. Edwin S. Stuart.

HON. EDWIN S. STUART, formerly Governor of Pennsylvania:

Mr. Mayor, Ladies and Gentlemen: I don't know just exactly what I am to do, but my friend, Mayor Blankenburg, said he wanted me to come here tonight and say a word of welcome to the visiting mayors, their ladies and the guests here tonight. I think that is hardly necessary because Philadelphia always welcomes anybody that comes here for the uplift, the advancement and the improvement of this or any other community.

This conference of American mayors is bound to be a great thing, gratifying not only to our municipality, but to all the other municipalities.

I am not one of those who believe that we are going backward in municipal government, as a general rule. I believe that municipal government, like everything else, is going forward. I believe municipal government was better twenty years ago than it was forty years ago; I believe municipal government is better today

than it was twenty years ago, and I believe that it will be better twenty years from now than it is today.

As the chairman has stated, I have had the honor of being mayor of Philadelphia, and I know that my experience in a city of 1,000,000 was just exactly the same as the experience of the mayor of a city of 5,000. They all have their responsibilities, and they all have somebody that can tell them better how to run things than they know themselves. That has always been so and always will be so. And I am satisfied in the feeling that I have that we tend to the betterment of municipalities all over our land, and on behalf of the reception committee, I cannot help extending to you a most cordial welcome, as I know Governor Tener would do if he were here.

I bid you welcome to Philadelphia and trust your remembrance and recollection of Philadelphia may be as pleasant to you as I am satisfied our remembrance of you will be, as long as we live.

HON. RUDOLPH BLANKENBURG, Mayor of Philadelphia:

Ladies and Gentlemen: We have come together this evening to get acquainted with each other; to have a good time; and to enjoy ourselves in the lighter vein. This is a preliminary to the important work that has caused this gathering of American mayors to meet in convention for the discussion of serious subjects that affect the well-being of all municipalities, large or small. This informal reception is tendered by the committee to the mayors, the delegates, their friends and their ladies who have honored us with their presence and it should not be marred by a lengthy address on my part, but a few words of welcome will be in order. Let me extend to you, the chief magistrates of the cities of our land, a most hearty and sincere welcome to the City of Brotherly Love. You represent all parts of our great republic and it is an especial pleasure to see in this distinguished company representatives of several important cities of Canada, our esteemed neighbors to the north of us.

This is an auspicious occasion and the first in the history of our country, I believe, where the executives of municipalities, large and small, have congregated in great numbers to discuss questions that affect the interest of all our citizens—the urban population directly and the rural, indirectly. Let me premise here, on the eve of the real work of the convention, that the idea of showing an-

tagonism towards public service corporations, that its object is to combat them in the legitimate pursuit of their business, is quite erroneous.

We have gathered for the purpose of devising ways and means by which we can live together in peace and amity. If we are wrong, let it be shown where we are wrong and we shall gladly concede it: if they are wrong, on the other hand, they should be willing to admit it and mend their ways. If they do not, they will have to bear the consequences through united action of hitherto disunited forces. How the false impression has gone abroad that this meeting of American mayors means the inauguration of a contest against all public service corporations, I do not know. There is absolutely no thought in our minds of any unwise onslaught upon public service corporations. While they are often called an evil, though a necessary one, I think they are a blessing if they are properly managed and regulated.

Philadelphia, you will agree with me, is the place of all American cities where an inaugural convention of this character should be held. I am pretty safe in this assertion because a majority, or at least a large number, of the audience before me are Philadelphians, and they will support me in this claim. Philadelphia occupies a memorable place in the history of our country. We have many places of interest, and the students of the inception and life of our republic, naturally give the Quaker City—with due apologies to Boston and Bunker Hill—first place as the birthplace of the republic. Many of you who have come from a distance may never have visited Independence Hall or seen the Liberty Bell. To me, these two emblems of the birth of the republic are so sacred that I never pass the one nor look upon the other without reverently uncovering my head.

I extend to you, one and all, a most cordial welcome and hand you the keys of the city with the wish that, when you leave, you will carry with you a remembrance of Philadelphia that will be pleasant as long as you live. May what we accomplish during this conference redound to the credit and benefit, not only of our own municipality, but of all the municipalities of our broad land.

We are at peace while the nations of Europe are engaged in the most deplorable war of all history. We are at peace because we have no entangling alliances with foreign countries, a position Wash-

ington, in his immortal Farewell Address so wisely counselled to maintain. Owing to this fact, we have friendly relations and are on good terms with all the warring nations, and when the time for negotiation of peace shall come, it will be the proud privilege of the United States to act as the leading arbitrator between the countries at war. Such is the position of our country. May a wise Providence forever maintain and improve it, at home and abroad. Meetings and conferences of the executives of our municipalities will do their part to promote amity and good fellowship at home; to lessen friction; and to establish justice and fair dealing between the cities and public service corporations.

With renewed hearty welcome to the City of Brotherly Love, I ask you all to hold in friendly memory the city of your temporary sojourn, the city we feel justly entitled to call "The Mother City of the Republic."

HON. H. C. HOCKEN, Mayor of Toronto, Canada:

Your Excellency, Your Honor, Ladies and Gentlemen: It is a gratifying thing as a citizen of Canada to share in the cordial welcome which His Honor the Mayor, has extended to us here. It is a compliment to Canadians to be invited to this Conference of American Mayors and is proof of the depth of mind of Mayor Blankenburg.

We count Toronto as among the American cities. While it is not under the same flag, we feel that there is only one people on the North American Continent, all animated by the same democratic ideals. The people of both countries are working out democratic institutions in their own way. While our systems are somewhat different, our purpose is the same and the relation which has existed for the past one hundred years between Canada and this country has strengthened the neighborly spirit that should prevail among people of common origin. This long period of amity proves what His Honor the Mayor has said, that the United States desires to deal justly with other nations.

We celebrated in the city of Toronto this year, the anniversary of one hundred years of peace between Canada and the United States. During all that period we have had a boundary of 4,000 miles between us without a gun placed anywhere. It should have been a lesson to the nations of Europe, but it is sometimes difficult

for a people or for a nation to learn lessons until the time for their application has passed. Sometimes they learn through great suffering.

I want to give the principal American municipalities credit for what they have contributed to the welfare of our Canadian cities. We in the city of Toronto have during the past few years tried to humanize the municipal government. We have tried to establish those services for the people which would best serve their human needs—services which did not exist a few years ago—and so this year the city of Toronto will spend about a mill and a half of the tax rate—about \$750,000—for the preservation of the health of the people; for the protection of womanhood, and other equally human services. We have taken our playground movement from your city of New York; we have copied our methods of dealing with criminals—minor offenders and confirmed drunkards and that class of delinquents—from the city of Cleveland; we have copied also from Cleveland their method of dealing with indigent old folks. In our institutions today, men and women have lived together for fifty years and are indigent, they are put into the institution where the old men are placed on one side of the building and the old women on the other side. We are going to stop that. We are going to give them a place where they can spend the rest of their days together.

We have adopted from the city of Atlanta a plan that we are going to put into effect for the improvement of our sewage system. We have secured from Washington our idea of a filtration plant. And so we have come over to the United States cities from time to time looking for the best methods of carrying on our municipal services. For the past ten days we have had our principal accountants in Philadelphia studying the methods in operation in your treasury department, which we are going to apply to our own city of Toronto.

I am glad, Mr. Mayor, and Ladies and Gentlemen, to have this opportunity to give credit to the American cities which are working our municipal institutions and improving them all the time, for all that we have received from them. I am not sure whether the city of Toronto will be able to give you anything in return, but if we can we shall be pleased to do so.

Our idea is to make life worth living to the people of our city, and our taxes, or at least a considerable proportion of them, are spent in increasing the comforts, the conveniences and the happi-

ness of our citizens. We have found that when we do that they are satisfied.

I entirely agree with His Honor the Mayor, that there should not be any conflict, certainly not any acrimonious conflict, between a municipality and the public utilities corporations. But we have found in the city of Toronto that some public utilities corporations are very hard to deal with. We have about made up our minds to have the public utilities municipally owned and operated for the people and by the people. Whether that would be possible elsewhere is a matter for each particular city to decide. But in the city of Toronto we have made some advance in that direction.

Let me assure you, Sir, that, throughout the Dominion of Canada, there is only one feeling for the American cities and for American citizens. Our boys come over here and marry your girls. Your boys come over to us and marry our girls. Our business relations with New York are closer than they are with Montreal; and the way our social relations are increasing is as surprising as it is gratifying.

During the past few weeks we have had a most striking illustration of the affection that the American residents in Canada feel toward the Canadian city of Toronto. We raised a patriotic fund to support the wives and dependents of the men who have gone to fight the battles of the Empire in France. We raised \$1,000,000, \$100,000 of which was contributed by American citizens who are residents of the city of Toronto. A hundred thousand dollars is a considerable sum for such a purpose. But the value that we put upon the sentiment that was back of the \$100,000 is a thousand times greater than the money it represents. We know that the Americans are satisfied with the treatment that they have had in our cities, and it shows that they have sympathy with us in this tremendous war. I know that I speak for all Canadian citizens when I say that these happy relations which have existed so long will continue to exist between the two nations which lie side by side, on this great North American continent.

PRACTICAL UTILITY PROBLEMS

REMARKS BY HON. RUDOLPH BLANKENBURG AS PRESIDING OFFICER

We are all impressed with the importance of this gathering of city officials from every part of the United States and from Canada. We shall have the privilege of listening to addresses by distinguished speakers from near and far.

As there are many addresses and great interest is being manifested in the proceedings, it has been decided to limit speeches to twenty minutes and this rule will be enforced with military precision. We desire to avoid giving one delegate or participant an undue advantage over another. The speakers, therefore, will kindly arrange their addresses so they can conclude within twenty minutes. Mr. Cooke asks me to state that all speeches will be printed in full, so whatever you have prepared will be published regardless of the time limit announced.

FUNDAMENTAL PLANKS IN A PUBLIC UTILITY PROGRAM

BY DELOS F. WILCOX,

Franchise Expert, New York City.

I have sometimes spoken of the relation between a city and its privately owned public utilities as an irrepressible conflict. The expressions "traction war," "gas fight," "telephone controversy," "electric light dispute," etc., are familiar to everyone. In the picturesque language of the newspaper and the street, public service corporations have long been described as public enemies, and the attitude of belligerency toward them has become chronic in many, if not most, American cities.

While this antagonism often assumes exaggerated, unintelligent and even fantastic forms, and while there is a substantial community of interest along many lines between the public and the utility corporations, we must not blink the fact that there is a permanent and fundamental conflict of motives between them. No amount of regulation and no possible development of good will and the spirit of coöperation can change the fact that private corporations operating municipal utilities do so for profit and for as much profit as they can get, while the consumers and the public strive to get as much service as they can at the least possible cost.

In this conference, which may properly be regarded as a step in the mobilization of the forces representing the public point of view, we must be very careful in our declarations, for the "enemy" is willing to take everything we give him and turn it to his advantage. Every humane principle that we promulgate for the alleviation of the "horrors of war" will be seized upon by him as the basis of an appeal to public opinion against our methods of warfare whenever we try to do anything effective. A public service corporation rarely admits that what is sauce for the goose is also sauce for the gander.

For example, the principle of state regulation by permanent commissions was put forward in this country a few years ago as a statesmanlike method of protecting the people from the exactions

of the public service corporations, while at the same time giving the corporations a fair deal. We now find that all the corporations have been converted to the idea of regulation. They not only welcome it but insist upon having it. They are so enthusiastic over it that they help write the laws and appoint the commissioners.

Other illustrations are the indeterminate franchise, the option to purchase at a fixed price, amortization of capital out of earnings and regulated monopoly. The public service corporations regard the indeterminate franchise as quite impossible as a substitute for existing perpetual franchises, but strongly urge it as a substitute for franchises that come to an end at inconvenient times. The "fixed price" stands like a stone wall against subtraction but yields itself readily to the friendly process of addition. Amortization provides a mask for the gentle art of making the consumers pay for "dead mules." Regulated monopoly is translated into entrenched monopoly.

The discussion of plans of campaign against high rates, poor service, political interference, financial tyranny and all the rest of the evils which we have set out to smite, can only lead to confusion of counsels unless we clearly grasp certain underlying issues involved in the relations between the cities and the public utilities. Without having definite thoughts on these issues, we can not think straight on anything else, and without knowing what any particular speaker's thoughts upon them are, the rest of us can have no measure by which to gauge the importance or fathom the meaning of what he says.

The underlying issues are:

(1) What shall be the recognized character of public utility investments? Shall they be regarded as speculative and held at the risk of the owners, or shall they be regarded as investments in aid of public credit and be given the same security as investments in municipal bonds? If new investments are to be regarded as non-speculative, shall the cities make good all past losses as well as assume all future risks?

(2) What shall be the attitude of the city toward public utilities as money-earning enterprises. Shall the cities seek to get from the utilities a revenue for the relief of general taxation? Or shall the cities subsidize utilities out of taxes? Shall the cities aim to have the utilities, whether under public or under private ownership, furnish their services at cost, or shall public utilities be required

to pay for themselves out of earnings in addition to being self-supporting?

(3) What attitude shall the cities take toward ultimate municipal ownership? Shall they assume that the utilities are to remain permanently as private investments under private operation? Or shall they assume that ultimately all the standard utilities will be publicly owned? If the latter, shall the cities in their franchise grants and their rate contracts merely take an option for purchase at some future time? Or shall they proceed at once to set in motion machinery that will ultimately bring municipal ownership about?

I shall answer categorically, according to my lights, the questions I have propounded under these three heads, and state my reasons for the answers given in each case.

(1) Character of the Investment

Public utility investments should be placed upon a non-speculative basis, and their security should approximate that of municipal bonds.

In the establishment of the non-speculative character of these investments, cities should not undertake to make good past losses, unless they are compelled to do so by franchise contracts.

So far as future investments in the standard utilities are concerned, the cities should assume the risks of loss due to unforeseen causes, and should substantially guarantee the integrity of all investments made at the request or with the approval of public authority.

Public utility investments in the past, with some exceptions, have been highly speculative. There has been a continual buzz of promoters around city councils and state legislatures for the grant of special franchises and charters for public utilities. In most cases the sole purpose of these promoters has been either to sell the franchise or charter outright, or to construct the utility, heavily over-capitalize it and then sell its securities for a much larger sum than the amount actually invested.

Public utilities are not always gold mines. A great deal of money has been lost in premature investments, and a great deal more has gone to the scrap heap with changes in the arts. Experience shows that the public suffers along with the investors when utilities find themselves "hard up." Without money to make adequate exten-

sions and improvements, or even to keep their plants in proper repair, public utilities cannot render the service which is properly demanded of them.

Public utility service, as an essential public function, ought not to be dependent upon a throw of the dice by the manipulators of stocks and bonds. It ought not to furnish an opportunity for any man or set of men to "get rich." It ought to furnish to multitudes of people of comparatively small means a safe and conservative investment for their savings. I am strongly of the conviction that it is disgraceful to a city to have its public service corporations in receivers' hands—almost as disgraceful as it would be for the city to default on its own bonds.

The elimination of the speculator and the stock-jobber from the utility field and the establishment of utility investments upon a safe, conservative, non-speculative basis, is to my mind a fundamental condition precedent to good service, permanently low rates and adequate public control. If capital is made secure and is guaranteed a steady return, it demands nothing more than the ordinary interest rate. Under these circumstances, we should not have to pay premiums to reward capital for a risk undertaken in embarking upon public utility enterprises. There would be no risk. The only special reward offered would naturally go to the men who actually operate the property; for when security and a sure return have overcome the characteristic timidity of money, we have then only to seek a means for enlisting the motive of men for efficiency and economy in the operation of the plant. This cannot be done by lavishing unasked rewards upon capital as such.

Our friends, the public service corporations, will welcome with open arms the proposition that security of the investment is the first and most fundamental plank in any rational program of public utility regulation and development. They are willing to make peace with us on these terms alone. I have said, however, that in my judgment, cities ought not to make good past losses on investments that were frankly on a speculative basis when they were made. I suppose that we are bound to allow for a considerable taint of human nature in the characters of those who own and operate public utilities, even in the "soulless corporations." I suppose that we must frankly concede to them the right to *pursue* the policy of keeping all they have and getting all they can. If we offer them security,

and do not ask for payment, naturally they will take our gift. They have been used to receiving gifts from the cities and are not ashamed to be public beneficiaries. We find them at this moment engaged with their eminent counsel and engineers in attempting to prove to the satisfaction of the court that whenever a public utility has lost money in the operation of its plant, its property is thereby made much more valuable, either in a rate case or in a purchase case. But these same eminent counsel and engineers are employed to prove also that where a utility has made lots of money, it is likewise thereby made much more valuable, either in a rate case or in a purchase case. The companies ask the cities to pay them a premium equally for their losses or their profits. This is the old game of "heads I win, tails you lose." It seems incredible that this double play should be made successfully before the regulating authorities of the country. And yet in many cases it is being done. When the companies have lost, they protest vociferously that they have been mere public agents, spending money for the benefit of the city and its citizens. But when they have won, they forget this agency theory entirely and fall back upon the entrenchments of private property and contractual rights established in the federal constitution. Then they have been doing business strictly on their own account, and the city will interfere at its peril.

I have great admiration for the genius of the writer who composed the famous couplet:

"When the Devil was sick, the Devil a monk would be;
When the Devil was well, the devil a monk was he."

It has many applications, and its application to the attitude of public service corporations toward public control is by no means the least important of them.

Aside from the fact that it is logically preposterous for the cities to make good the speculative losses of the past, such a course would be financially disastrous. It would mean the acceptance and guaranty of the over-capitalization which has brought many utilities into bankruptcy under private management. We may as well dismiss the pretty dream that a city will acquire municipal ownership by giving its bond to Shylock for a pound of flesh, taken nearest the heart, with all the blood that goes with it. When we acquire utilities or recognize their capital value in rate regulation

or franchise contracts at a figure double or treble the value of the physical property, and pay for them in bonds or impose upon the rate payers the perpetual burden of supporting this inflated valuation, we do not secure municipal ownership or public control. Instead, we strengthen and make secure the control already exercised by the owners of public utilities. Mere title is of small importance. The mere fact that rates are fixed by a public service commission, by ordinance or by a contract, has a very limited significance. If we have bound ourselves to pay more than the property is worth and have not paid it, we may be much worse off than if we had not promised. If we fix rates on the basis of an inflated valuation, our position may be much weaker than if we had not fixed rates at all.

If future investments in public utilities are to be non-speculative, someone besides the investors must carry the risk. If we frankly adopt the theory of public agency, which is clearly indicated in the title "public service corporations," there can hardly be any question as to the shoulders upon which the burden of the risk should fall. It is for the service of the public that utilities are established and maintained. More and more, as time goes on, the public nature of these services becomes apparent and imperative. Interruption of service cannot be tolerated. Under the modern organization of society, individuals cannot render utility services for themselves, except at such enormous cost as would make modern city life impossible. Therefore, as seems clear to me, the public should carry the risk of the investment. But, if the cities are to assume the risks of the future in order to give stability to capital, and thereby to secure low rates and dependable service, it is clear that the control of the investment by public authority must be much more minute and far-reaching than it has been in the past.

(2) *Public Utilities as Money-Earning Enterprises*

In my judgment, public utilities should not be regarded as a legitimate source of profit to be used for the relief of general taxation.

Compensation for franchise grants, and special taxes or license fees imposed upon public service corporations, should not be encouraged, unless the proceeds of such compensation or taxes are to be used in paying for the property.

Every individual public utility should be made to render a clear account of itself and, as a general rule, should be self-supporting.

Public utility services should be rendered as nearly at cost as practicable, except that the rates should include a sufficient contribution to retire the investment within a definite period of time.

Public utilities should receive credit for all the service rendered by them to the city and its various departments, but only under unusual conditions should the city assume to subsidize a public utility service out of the proceeds of taxation or otherwise.

It is not inconceivable that the time may come when public utility services will be furnished free, as elevator service is, but for the present at least, in view of the habits of the people and the financial limitations of the cities, each public utility should continue to be operated on the basis of charging those who use it adequate fees for the service rendered. On the other hand, it seems unfair and unstatesmanlike to attempt to levy a special tax upon the patrons of any particular utility. Possibly the practice of taxing property devoted to the use of public utilities the same as other property held by private individuals may be justified; but except in those cases where taxation is used as a weapon to secure control, it seems that at least the utility property located within street limits should not be taxed. I should be willing to exempt from ordinary as well as special taxation all property actually devoted to public use in the rendering of utility service, under adequate control, but I hesitate to advocate, at the present time, so radical a proposal. I would not, however, advocate the relief of public utility property from the burdens of taxation, and plenty of it, if such relief is to be merely a special privilege to be reflected in increased private profits.

While each of the public utilities should in the main be self-supporting and independent, there is a certain community of public interest among them. Conditions may arise, therefore, under which the rule I have laid down should be modified to the extent of allowing us to take easily earned profits from a strong utility to wipe out the easily incurred deficits of a weak one.

I have said that the rates and charges should include enough to maintain a sinking fund for the retirement of the investment. This requires explanation and defense. It anticipates in a measure our discussion of ultimate municipal ownership. I do not mean that the patrons of a public utility should contribute a sufficient sum to the earnings to enable a public service corporation to pay

off its bonds and still retain full title to the property. I mean that under public ownership, or, under private ownership, as a means of ultimate public ownership, the consumers should be required to pay for the plant and give it to the city. It is often urged that this policy would impose an unreasonable hardship upon a single generation of public utility patrons. It might also be urged that the patrons of a public utility represent a class and therefore should not be required to buy a great property and turn it over without charge to the community as a whole. These objections have certain apparent weight. It seems clear to me, however, that the amortization plan will save a considerable portion of its own cost by making the investment doubly secure and thus reducing the rate of charge for capital under either private or public ownership. Moreover, we have experienced so many disasters and are on the brink of so many more as a result of the reckless financiering of the past, both as to public improvements and as to privately owned public utilities, that we should adopt every possible measure to get these enterprises upon a conservative financial basis. While a number of utilities at the present time seem very well established, all of them have been largely transformed within a generation, and we have no absolute assurance that the investments in any of them will not become obsolete within a single generation. If the public is to assume the risk of obsolescence, it will be a safe and highly reasonable policy to meet obsolescence in advance. Then if the utility continues to be useful, both the consumers as such and the city at large will enjoy a distinct advantage. If, on the other hand, the utility or the property now used by it becomes obsolete, we shall avoid the unhappy condition of still being in debt for property that has disappeared. Where a city is able to enter upon municipal ownership at once and take care of the sinking fund by means of taxes, I have no objection to that course, but I feel that it is a great deal better to require the consumers in one generation to pay for a public utility plant, in addition to maintaining it, than it would be not to have it paid for at all.

Water works and lighting plants are so essential to the city in the performance of its governmental functions that where necessary a city may reasonably contribute out of taxes a very considerable proportion of the income necessary to make such utilities self-sustaining. This contribution is in reality only a payment for services

rendered and should not be regarded as a subsidy. New York City has gone a step further and has put its credit and its taxing power behind a great rapid transit enterprise in order to secure for its citizens a high standard of widely extended service at the five-cent standard rate of fare. Philadelphia is now talking of assuming a similar contingent liability in the case of the local transit lines. I do not wish to be understood as condemning this idea, but I will say emphatically that in my opinion a city ought not to enter upon the policy of subsidizing public utilities until it has absolutely eliminated the speculative element in them so far as the private investment is concerned.

(3) *Ultimate Municipal Ownership*

In my opinion, cities should *not* assume that public utilities are to remain permanently as private investments under private operation.

On the contrary, they should assume that all the well-established utilities will sooner or later be publicly owned, private capital being entirely excluded from the public streets except as it is loaned to the city.

In their franchise grants, and in all contracts affecting rates or granting privileges, the cities should establish the option to take over the utilities either at pleasure or at reasonable fixed intervals.

Wherever possible, the cities should go still further and without more delay definitely set in motion the machinery necessary to compel the gradual withdrawal of private capital from the public streets and the gradual acquisition of the utility plants by the cities as public property.

This brings us squarely to a consideration of the theory of municipal ownership. I call specific attention to the fact that municipal ownership of the fixtures in the streets presents no serious obstacle to the operation of public utilities by larger units. It is apparent that the development of interurban utilities, the extension of utility service to rural regions and the grouping of a number of cities in relation to a single source of supply often present serious obstacles in the way of separate operation by or for each distinct political unit. I shall assume that the most appropriate governmental agencies for the operation of these utilities will be developed as the need arises, and therefore my argument will be confined to

the desirability of municipal ownership, with or without public operation.

While it is true that in its relation to public utilities, the ultimate demand of the public is the best possible service at the lowest practicable cost, I do not admit that the entire case is to be determined by a comparison of the rates and efficiency of operation of individual public and individual private plants. I have no disposition to deny that serious administrative and political difficulties now obstruct the movement for municipal operation. I take my stand for the immediate adoption of the policy of ultimate municipal ownership on broader grounds. I need not repeat what I have already said in regard to the recognized public character of these services. I need not go at length into the difficulty of adequately regulating a private monopoly. I need not claim greatly reduced rates or greatly improved service as the immediate result of municipal ownership. All these considerations are factors in the great development of city civilization which makes ultimate municipal ownership of public utilities appear to be inevitable, whether we want it or not. But back of all the usual arguments, pro and con, on this subject lies the fundamental fact that the existence of a great body of private capital invested in the public streets is a continuing menace to a city's welfare.

The concentration of the control of enormous masses of the common wealth in the hands of a few men, irresponsible to the community for the manner in which they exercise such control, is in itself a recognized menace to civilization. This applies to all kinds of enterprises, but when we come to public utility enterprises, which are actually performing a public function, and which are constantly in contact with the regularly established political authorities, and which operate by means of easements in public property, the dangers of concentration of control are multiplied.

It is well known that in the great cities the development of land values is such as to make it impracticable for the majority of men to be landholders. Cities create a proletariat, a fourth estate, which, in proportion as it becomes landless, homeless and propertyless, becomes a dangerous element in a democracy. Political and economic stability rest upon widespread participation in wealth. The conditions that prevail in modern cities in certain respects tend to cultivate the most dangerous factors in democracy. Cities by their

very nature are coöperative, and public utilities, *par excellence*, are the visible symbols of that coöperation. If in the cities we are passing out of the stage of widespread individual ownership, our only safe course is to develop a strong community ownership, not a mere sentimental loyalty attaching to the city that we love, but a substantial universal economic interest in it. Capital is too valuable to society to be wastefully destroyed. We all respect it. If we destroy it, we are destroying that which ultimately belongs to the community. The public ownership of public utilities, which is merely the complete public ownership of the public streets, not only frees the agents of the people from the compelling influence of invested private capital, but gives those agents and the people they represent a new sense of responsibility, a new sense of civic loyalty and a new attitude of conservatism, all of which are of the utmost importance in the orderly development of our civilization.

This matter of municipal ownership is a long story. I can hardly hope, in the time available this morning, to convince anyone whose mind is already set the other way. I maintain that municipal ownership, as an ultimate policy, is both desirable and inevitable, but the real point of my argument here is that, if it is either desirable or inevitable, the cities should begin to prepare for it now. I sometimes think that the warm opponents of municipal ownership and operation, in their zeal to show that our cities are politically unfit to undertake public utility enterprises, tend to gloat over the proofs they find, as if they were really glad that the cities in which they live are incapable or unfit to undertake these functions of such grave concern to everyone. It seems to me that at least all of us who take the public point of view, are bound to strive to make our cities fit for municipal ownership and operation, if they are not so already. *We* at least can have no sympathy with the attempts being made on every hand to hinder, hamper and render abortive the municipal ownership movement. *We* at least can not approve of the attitude of those who are willing to saddle the city with an enormous overcapitalization as its initial handicap when it undertakes municipal ownership. *We* at least can have no sympathy with the efforts constantly being made to pack commissions and councils with weak or private minded men who will effectively prevent or postpone the development of efficient and intelligent public agencies able, in case of need, to make municipal ownership a success.

The problem that the cities must ultimately meet, and that they should begin to meet definitely now, is the problem of paying for the public utilities so that the actual transfer of the property from private ownership to public ownership may be ultimately made. It is a mistake to assume that a reduction of rates will bring public ownership any nearer, except as it may squeeze the illegitimate values out of franchises and render the public utility field uncongenial for speculators. Whenever a city has an opportunity, in the granting of a new franchise or in the making of a contract, to secure an option for the purchase of a public utility at a reasonable fixed price, it should do so, but in such cases it should place the exercise of that option and the provision for the payment for the utility ahead of rate reduction in its program. If we secure an option to buy a utility at a fixed price and then reduce the rates to a point where nothing can be saved from earnings for an amortization or purchase fund, we make the future acquisition of the property more rather than less difficult. For unless we are willing to pay for the utility out of taxes, it will be very unpopular and very difficult, having pared the rates to the bone, to increase them again for the purpose of establishing a sinking fund.

You may not all agree with me in my attitude on the three fundamental issues which I have propounded here today, but I maintain that what you say or what I say about general public utility problems can be of very little importance to ourselves or to anybody else unless we know what we think on these issues and make our thoughts known. I repeat the three questions:—

1. Should public utility investments be speculative or non-speculative?
2. Should public utilities be exploited for the benefit of the taxpayers or should they be operated on the theory of rendering service at cost?
3. Should the cities, *now*, take all possible steps to prepare the way for ultimate municipal ownership?

THE REGULATION OF MUNICIPAL UTILITIES

BY NATHANIEL T. GUERNSEY,

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New York City.

When Mayor Harrison and I were law students together, Hon. Edward J. Phelps, then one of our professors, and later ambassador at London, told us one thing which I still remember, namely, that it is very difficult to make a thing clear to anyone else if you do not know anything about it yourself. The first step in the consideration of any question is a clear comprehension of just what that question is.

Regulation, in the sense in which the term is used with reference to public utilities, means to subject to rules, restrictions or governing principles.

These rules must be general and fundamental, and should not attempt to cover the details of management. The supreme court of the United States not long ago said (209 U. S. 118):

It must be remembered that railroads are the private property of their owners; that while from the public character of the work in which they are engaged the public has the power to prescribe rules for securing faithful and efficient service and equality between shippers and communities, yet in no proper sense is the public a general manager.

Subject to the two leading prohibitions that their charges shall not be unjust or unreasonable, and that they shall not unjustly discriminate so as to give undue preference or disadvantage to persons or traffic similarly circumstanced, the act to regulate commerce leaves common carriers, as they were at the common law, free to make special rates looking to the increase of their business, to classify their traffic, to adjust and apportion their rates so as to meet the necessities of commerce and of their own situation and relation to it, and generally to manage their important interests upon the same principles which are regarded as sound and adopted in other trades and pursuits.

The public may not undertake the management of these properties because their management is not a public right or a public function; but that the public not only may, but should, establish such fundamental rules or principles as a basis for management and operation as are necessary for its protection, and for the protection

of the utility as well, is not now generally controverted. The experience of the last fifty years has demonstrated that competitive utilities in the same municipal field are not the solution of the question, and that the normal, and generally inevitable, consequence of such a situation is consolidation, frequently preceded by the insolvency of one or more of the utilities in question. As a consequence, the public utility laws adopted within the last few years in a large number of states have established a general public policy which negatives the desirability of such competition.

The questions relating to the regulation of public utilities are important and are growing more so every day. The investment in the United States in the utilities affording service to single communities, such as water, gas, electric light, street railways and local telephone exchanges, excluding railroads, interurban railways and long distance telephone lines, is estimated at nearly nine billions of dollars. By far the greater part of this enormous investment is made up of the savings of hundreds of thousands of frugal people. The service furnished touches, directly or indirectly, not only the pocketbooks but the comfort and convenience of nearly every dweller in every municipality in the country.

The relation between the utility and the public is essentially that of buyer and seller. What the public wants and demands is, first, good service; second, the widest possible extension of this service; and, finally, a fair price. These requirements have been stated in what I believe to be the order of their importance from the public point of view. The thing of greatest moment is that the service be good, in the broad sense that includes efficiency, and everything from courtesy to the character of what is furnished, which is essential to fully meet all reasonable public demands. What comes next is that this service be made available, so far as practicable, to every person in the municipality who desires to utilize it, with only such limitations as must necessarily inhere in the question of cost. Finally, there remains the matter of a fair price.

From the standpoint of the utility, if it is to fulfill these public requirements, there are two things which are absolutely essential. The first is that there be a return from its operation sufficient to constantly attract the new capital which is continually necessary. Anything short of this is less than a reasonable return, and must inevitably result in confiscation. One of the most common and most

misleading errors in the consideration of these questions is to treat a public utility in a growing American city as a completed investment. The investment is never completed. When the plant has been finished and begins operation, the investment has only started. There must be constant additions to it, if the property is to keep pace with the growth of the community, and its obligations to the community are to be performed. These additions demand an unceasing stream of new money, which can only be secured from the general supply of funds seeking investment. This general supply of funds is the aggregate of the public's savings, which the public desires to reinvest. The present remarkable facilities for transportation and for communication are such that neither those seeking investments nor those seeking funds are limited to their own communities, nor, in the case of the larger enterprises, to the United States. This has recently been brought sharply home to us by the desire of foreign holders of American securities to realize upon them, on account of the financial conditions caused by the present European war.

This general market to which the public utilities and all other enterprises desiring to obtain money must go, is in the very nature of things a highly competitive market. Those who have money to invest will invest it where, all things being considered, it will bring to them the highest return. It will go to the highest bidder. Today, and in the near future, public utilities, for the money which they require, must compete not only with all normal demands, but with the enormous abnormal requirements due to the war. Investments in public utilities, just exactly like investments in real estate, manufacturing, banking and everything else, must be attracted by a prospective profit, and this profit, taking into account hazards and other conditions, must be equal to that offered by other available investments. Otherwise, the investors who are seeking a profit will not divert their investments from more profitable enterprises to public utilities. To secure normal, natural business conditions, the profits to be derived by the investor from the various channels of investment must be equal when the variations in hazards and other material conditions are taken into account. When this condition exists, each class of investments will normally secure its proper proportion of the general supply of money. If one class of investments is temporarily more profitable than another, money will flow into that

class until, through the operation of the laws of demand and supply, it is brought into its proper relation with the others. The contention that because money invested in public utilities is devoted to a public use, it is therefore not entitled to relatively the same return as private investments, the conditions, hazards and other factors affecting the investment being considered, will never be sound as long as the laws of demand and supply remain effective. To secure money for investment in public utilities, it is necessary to pay what it is worth in the market, that is, as much as someone else, with a not less attractive investment, will pay for it.

The second essential, from the utility standpoint, is that freedom in the transaction of their business which is necessary to progress, and to efficient, economical operation, and that this freedom be not unduly restricted by attempts at so-called regulation, which are not in fact regulation, but are efforts to control the details of management and operation. The utilities are essential to the public. The public is just as essential to the utilities. The public welfare requires that the interests of each be protected and that the rights of neither party be violated. What tribunal should stand between the buyer and seller and maintain the scales in equilibrium?

Regulation costs money. It is not an over-statement to say that millions of dollars are being spent every year for this purpose in the United States. In the ultimate analysis, this burden inevitably falls upon the public. It is an item in the cost of the service. To justify what it must pay for this regulation, the public must derive benefits more than equal to its cost.

To make regulation of benefit to the community, and to justify the enormous expense which it imposes upon the public, several things are necessary:

1. The regulatory body must be composed of men of unquestioned integrity and force of character.

To make regulation worth anything, the regulatory body must have, and this means it must earn and be entitled to, the respect and confidence of both of the interested parties, so that its conclusions, even though unacceptable, will be promptly accepted both by the public and by the utilities which are affected by them. It must, as far as possible, be free from all influences which would militate against a just, impartial, business-like administration.

2. The men composing the regulatory body must have not only the capacity but also the business and special training necessary to the proper determination of the important and intricate questions which are presented to it.

The successful management and operation of a public utility require ability of the first order, combined with special training and experience. The regulatory body, while not engaged in management or operation, must be able to thoroughly understand all of the questions presented by management and operation.

3. The regulatory body should be composed of men who are free from other interests and engagements which would tend to prevent their giving to the performance of their duties the time which is requisite if sound results are to be obtained.

The value of the results attained will vary in almost direct proportion with the approach to meeting these requirements.

If these general considerations are sound, the conclusion is inevitable that the regulation of municipal utilities should be not local but in the hands of state commissions. The municipality is the representative of the buyer. The identical considerations which prohibit the utility from being an arbiter between itself and the public negative the propriety of local regulation. No man may or should sit as a judge in his own case.

I have no sympathy with the unwarranted attacks which are so frequently made upon the integrity and capacity of city officials and members of city councils. The public selects them, and it does not lie in the mouth of the public to discredit the men whom it has selected. But these men are elected. They are inevitably subject to constant, direct, most persuasive political influences which they cannot ignore, and which they ought not to ignore. They regard themselves as the representatives of the public, and they would be unfaithful to the trust which is reposed in them if they did not.

But these very considerations which should be the subject of commendation and not of criticism, disqualify them to act as judges in matters in which they, as individuals, and the public generally are directly interested. The decisions of such tribunals can never inspire confidence. A decision in favor of the public is immediately criticized as due to political considerations. A decision against the public arouses suspicion as to considerations of a different character, and a compromise is criticized as political.

Moreover, members of city councils cannot, in the very nature of things, acquire the special knowledge and experience necessary to the correct determination of the many varied, intricate and important questions which arise out of the regulation of public utilities. They are, in the very large majority of cases, men whose personal

affairs must have their first consideration, and who can give, and are only expected to give, to the public business a relatively small proportion of their time and effort. They usually do not hold office long enough to acquire the experience necessary in order to make them efficient in the numerous special subjects involved in the regulation of utilities.

There has been criticism, much of it unjust, of the participation of public utilities in municipal politics. The utilities do not belong in politics; where they are in politics, it is not of their own volition, but because conditions beyond their control have forced them in. Their regulation by city authorities must inevitably bring them into intimate relations with every political faction in the community. This always has been, and always will be one of the results of municipal regulation.

State commissions, with the advantages of relative permanency in office, permanent staffs of experts and accountants, and freedom from local political influences, have not been able to attain results with which they themselves have been satisfied. City councils or city boards which are subject to all of the difficulties which state commissions meet, and are subject to many from which state commissions are free, must, in the very nature of things, be less efficient and less successful as regulatory bodies than state commissions.

The local self-government argument is not a sound one. The public interest does not require the local authorities to do things which may be better done by others. If what it is desired to accomplish by regulation is to equitably adjust the differences which naturally arise between the public and public utilities, so that the public may have good service, widely extended, at a fair price, and so that the business of the utilities may be upon the stable basis which is necessary to enable them to render this service, and to make possible the development which is essential to the public interest, then there is absolutely nothing in the local-self-government argument. The real question is, how can this regulation be best accomplished? If it can be best accomplished by the local tribunal, then it should be done by that tribunal, not because it is local, but because it is best. If it can be best accomplished by a state tribunal, then the public should have the state tribunal and should not take something that is not as good, in order to have this work done locally.

There are some things which cannot be accomplished by regu-

lation, and it is well to have this clearly in mind. The idea seems to be more or less prevalent that the function of regulation is to decrease prices and impose burdens upon the public utilities. Every burden upon a public utility is a burden upon the public, which in the final analysis must pay the bills. If the burden brings with it a benefit that is worth to the public what it pays for it, the public can afford it. Otherwise, it cannot.

Rates cannot be indefinitely reduced by regulation. The downward tendency in rates that has been constant in recent years has been partially met by economies brought about through efficiency in management and operation; but there is a limit to what may be accomplished by such economies, and if this limit has not already been reached, it will be soon.

But what it is desired to emphasize is, not that existing rates are low, but that neither by regulation nor by anything else can the public buy this service for less than it is worth; that neither by regulation nor by anything else can the public, speaking broadly, have this service without paying for it what it costs, including as a part of that cost a reasonable profit upon the money invested in furnishing the service. Nobody has ever been able to get something for nothing for long. Ever since trade commenced, the cost of any article, or of any service, has been an important factor in fixing its price. The farmer cannot raise and sell his cattle and hogs and grain for less than they cost; the manufacturer cannot manufacture and sell his product for less than it costs; the merchant cannot buy and sell his merchandise for less than it costs. To attempt to do this is to invite bankruptcy. Public service corporations are not exempt from the operation of general, fundamental, economic laws. The operation of these laws makes it impossible for them to furnish service for less than it costs, this cost including, as has been said, the profit that is necessary to secure the requisite capital. Regulation cannot change these laws. Regulation cannot enable a public utility to buy rails, or cast iron pipe, or copper, or labor at less than it is worth in the market. Regulation cannot enable a public utility to buy money at less than it is worth in the market. And until regulation can do this, it cannot secure the service of these utilities for less than it is worth. Unjust regulation might wreck some public service corporations. Unjust regulation might drive public service corporations out of business, but for it to enable the public to

secure something for nothing, to secure a service for less than it is fairly worth, is an economic impossibility.

There is an important corollary to this proposition. An insolvent public service corporation never gave good service. It never gave good service, because it is not within the power of such a corporation to give good service. A notable illustration of such a situation is afforded by the conditions surrounding the street railroad traffic in Chicago a few years ago, before an adjustment was made between the companies and the city which enabled the companies to secure new money. Only a prosperous public service corporation can furnish good service, because good service requires money. Money is necessary to secure an adequate number of competent employes; it is necessary to maintain the property in the condition which is a prerequisite to first-class service; it is necessary to make the replacements, renewals and additions which are required if the plant is to be adequate and up-to-date, instead of inadequate and obsolete; it is necessary to provide for the additions and the surplus capacity which are absolutely essential if the public is to have the service when it needs it and where it needs it. This service the public can have by paying for it. It cannot have it without paying for it, simply because a public service corporation, just like a farmer or a manufacturer or a merchant, cannot live without a profit.

The matter of the regulation of municipal utilities is still in the development stage in this country. This is true, both as to the law and as to the practice and procedure. If this development is to result in successful regulation—and by successful regulation I mean something that will contribute substantially to the welfare of the public as a whole—this must be accomplished through the coöperation of the public and the public utilities, with a frank recognition of the principles which have been discussed. It should result in good will, decreased cost and increased efficiency.

PHILADELPHIA'S TRANSIT PROBLEM

BY A. MERRITT TAYLOR,

Director of the Department of City Transit, Philadelphia.

Large cities of the United States are constantly outgrowing the capacity of existing facilities for public service. Among those facilities which are particularly essential to a city's development are water mains, sewers and transportation lines. They may be likened to the arterial system of the human body. When they become inadequate and choke the circulation which they are designed to carry, or when they fail to expand as the body grows and to meet its increasing requirements, the various sections involved must wither, and the body as a whole must suffer.

Philadelphia, in common with other large cities, has outgrown her present urban transportation system and is proceeding to establish such additional facilities as are required to furnish adequate service to the people.

This has always been a city of individual homes spread over a comparatively large area. We are now confronted with the necessity of providing rapid transit facilities to eliminate existing congestion of traffic and the excessive loss of time in traveling the increasingly great distances between available residential areas and places of employment. The inevitable alternative would be to crowd the future increased population into flats and tenements in the areas already built up. Such conditions are beyond the pale of consideration.

Standing squarely by the ancient advice: "Look before you leap," the city undertook two years ago to make a practical, scientific and complete study of what is needed, and of ways and means of accomplishment. The results of this study were embodied in the report of the transit commissioner in 1913, and were crystallized in the recommendations for the immediate construction of twenty-six miles of high-speed lines by the city, to be equipped and operated preferably by the existing company, which controls practically all of the street railways in the city. Negotiations were then undertaken with the management of the existing company.

The "program," resulting from the negotiations between the existing company and the department of city transit, provides for the construction of certain subway and elevated railway lines by the city at a cost of approximately \$46,000,000, and the equipment and operation thereof by the company in common with its existing system as one great unit for public service. The cost of equipment will be approximately \$12,000,000. Proper provision is also made for future extensions.

The "program" provides for the operation of all high-speed lines in conjunction with the surface system, which will serve without extra charge as the agent for the gathering and distributing of passengers who use the high-speed lines. Thus the advantages of rapid transit will be extended as equally as practicable to every front door in Philadelphia.

Passengers will be enabled to travel in a forward direction for one five-cent fare between every important section of the city and every other important section of the city, conveniently, quickly and comfortably by way of the combined surface and high-speed lines, regardless of the number of transfers required in so doing.

Recent legislation has clothed the city with the legal authority, financial ability and executive machinery to construct, and if necessary, to equip and to operate these facilities as well as surface lines. A constitutional amendment in process of adoption will provide many additional advantages in financing the undertaking.

We recognize the importance of coöperation between the city and the company in establishing these new facilities in a manner calculated to best serve the public. We also recognize the importance of protecting against destructive competition capital which has been invested in the existing system.

The "program" as arranged provides that the existing company shall receive annually out of the earnings of the municipally-owned lines:

1. Interest on the company's investment in equipment.
2. A further payment which will sustain the company's normal net income gained prior to the establishment of the municipally-owned line or lines against decrease or loss due to the company participating in the coöperative program as stated therein.

It further provides for the elimination of the discriminatory eight-cent exchange ticket now in use in certain sections of the

city in a manner which has been arranged between the officials of the company and the department.

This "program" still awaits ratification by the underlying company which is called upon by the operating company to supply annually the amount of additional capital which may be needed for the normal extension of the existing system.

Philadelphians are practically unanimous in urgently demanding rapid transit facilities and free transfers. No individual or obstacle can withstand the united public in this matter. As the citizens are determined to establish adequate rapid transit facilities, they will be established.

We expect the existing companies to welcome the adequate protection which the program for rapid transit development affords their stockholders against loss to their present net income by reason of their coöperation.

The use of the public credit in such an enterprise as this is essential and entirely justified. The city gets an almost indispensable modern utility. The people obtain wide and comfortable range of movement and enormous and valuable time saving. The city gets great increases in taxable values and a revenue producing property which, with the growth of the city, will not only become more than self-supporting, but will reap out of earnings its entire cost.

The city will thus ultimately own the high-speed system as a great income-producing municipal asset with the entire cost thereof repaid out of earnings.

We are now designing and preparing to construct the recommended subway and elevated railway lines. That they will be constructed and operated there is no doubt, for in the event of failure upon the part of the existing company to coöperate as provided, an independent operator can readily be obtained to equip and operate the municipally-owned high-speed lines upon favorable terms. As a very last resort the city itself is thoroughly competent to equip and operate the facilities temporarily or permanently as a municipal undertaking.

We do not expect the existing company to coöperate with the city in establishing the rapid transit lines in a manner which will reduce its existing net income. On the contrary we are extending to the existing company adequate protection against any such loss in consideration of its coöperation. Therefore, no loss can come to

the company by reason of the city's action unless the company should decline to coöperate and to accept the protection proffered by the city.

I have now come to the point which I wish to particularly emphasize. Philadelphians stand for a "square deal" between the city and vested interests. We recognize the vital importance of honestly protecting capital invested in Philadelphia to the extent that it shall produce an attractive return for reasonable service rendered to the public.

In the case of our local railway system a contract was entered into in 1907 between the city and the company; with the terms of this contract in force as a basis, it is the policy of the department of city transit in establishing the high-speed lines under the terms of the coöperative "program" to protect the company to the extent of its annual net earnings gained prior to the opening of the municipally-owned lines, regardless of the amount of capital actually invested in the property. We want Philadelphia to stand out as a safe place for the investment of capital for public service.

We recognize the great part which the railroads and other public service corporations can take in the development of this city and its industries, but to so take this part they must have credit upon which to raise large sums of money and they must be assured of an adequate and attractive return thereon and immunity from unwarranted competition or political and public attacks.

The capitalists of this country are going to invest their money in communities where capital is justly treated and permitted to earn attractive returns, and are not going to invest capital in communities where its security is impaired and its productiveness is unduly curtailed by unreasonable legislation, regulation or competition.

I believe that the time is past when corporations, through political, financial or other influence, can retard the development of the resources of our great cities, make unfair bargains for franchises, or refuse to coöperate upon just terms in carrying out great municipal developments and undertakings which are dependent upon their coöperation.

On the other hand, I believe the time is at hand when cowardly public officials will not be permitted by the thinking public to be led by blackmailers and demagogues into imposing unreasonable and

onerous terms and conditions upon corporations and vested interests; they will no longer be able to make political capital by pursuing any such course in an enlightened community.

The people of Philadelphia will be fair with corporations and with capital, but they will demand the same fairness from corporations and capital in return.

Only those who fail to heed this public demand need fear the inevitable disaster which the ire of an incensed public, focused on them from every angle, is sure to bring about.

MUNICIPAL LIGHTING RATES

BY RAY PALMER,

Commissioner of Gas and Electricity, Chicago, Ill.

INTRODUCTION

For many years most cities in the United States have been trying to solve individually problems relating to their local lighting rates without proper knowledge and investigation of the subjects to find out what benefits have been accomplished by other cities under similar local conditions. In other words, there has been a lack of coöperation on the part of our municipalities in dealing with light rate problems. Too little publicity has been given low rate settlements made by utility corporations with cities.

The results of this failure of municipalities to work closer together for fair and reasonable rates are clearly shown by the high kilowatt hour rates, or yearly arc lamp or tungsten rental rates paid by certain cities as compared with low rates in vogue in other cities under similar local cost conditions.

In comparing the relative public street lighting rates, let me ask you, gentlemen:

(a) What are the cities which you represent paying for public street lighting? Are you purchasing electrical energy and maintaining the lights by city labor (trimmers and patrolmen, etc.) or are you contracting with utility companies for lights on a yearly basis?

Perhaps your rates are high because no thorough investigation was ever made of cash costs and fixed charges upon the actual valuation of the utility property supplying the service so that excess charges are made which are not fair or reasonable to the public.

(b) It is well to ask: What do these rates mean in terms of the relative quantity and quality of lighting? In other words, under your local conditions, is your city getting economical rates and efficient service from the utility companies which furnish energy or contract to supply service?

This convention's slogan should be "Economical rates and efficient service from all sources."

A low rate does not necessarily mean an economical rate, as the service rendered may be poor. Municipalities must demand efficient service at economical rates. Economical rates can be appropriately defined as those which are fair and reasonable to the producer (utility company) and the consumer (the public).

(c) What are the reasons that a city under similar local physical construction and operating conditions has higher rates than other cities of the same size?

In the first place high rates are many times the result of bad politics or a lack of knowledge on the part of members of the council who approve of contract ordinances or yearly contracts allowing high rates. Public utility companies in one city may have more political influence than in another, resulting in the passing of unsatisfactory rate measures, involving the giving away of rights which should remain with the city.

A city may have little appropriated for rate investigations when the contract lighting rate ordinance has expired, resulting in an unfair and unreasonable contract which is based only on a preliminary report by a city official who is either incompetent to report upon such a technical subject, or who is influenced in different ways to favor the utility corporations in his report, while another city obtains a fair and reasonable rate ordinance by the city council through its committees cooperating with a competent expert in carrying on a thorough rate investigation after a proper valuation of a utility property is known.

The refusal or procrastination of a utility company to open frankly their books or to cooperate with the expert making the investigation delays a satisfactory settlement which results in unnecessarily high expense for all concerned.

In the second place, the union labor scale of wages, which is materially higher in some of our cities than in others of the same size, will naturally increase the telephone, gas, lighting or other municipal rates in these cities.

The two principal factors discouraging municipal ownership of public utilities in our cities today are bad politics and the relatively high union scales paid municipal labor to that of the low scales paid utility corporation labor for the same class of work. When we eliminate the results of bad politics by non-partisanship elections and establish and regulate a fair living scale of wages in all classes

of labor, the municipality will be placed on the same operating cost basis of utility service as the corporations with the advantages of low interest charges on the investment. Until such time that this is accomplished municipal ownership will seldom be economical or practical for the public taxpayer.

The object of this paper is to place before this conference facts concerning: first, the principal factors entering into municipal street lighting costs; second, how far Chicago has studied these factors in order to solve its street lighting problems on an efficient and economical basis; and third, what steps are necessary to utilize all good rate-regulation work and improvements which have been accomplished in various cities.

STREET LIGHTING COST FACTORS

The principal economical factors to be considered in establishing the kind, quality, type and quantity of public street lighting in every city are:

Kind of Lighting

(A) Resources of lighting elements.

(a) Can electricity be generated or purchased cheaply due to nearby water power or low priced coal and labor?

(b) Is natural or artificial gas relatively cheaper for lighting purposes due to location near gas or coal fields?

Franchises:

(B) Does the gas company franchise give more to the city than the electric company franchise, such as requiring the extending of gas services free of cost to the city for public street lighting and by not specifically allowing the city to use free of cost the electric company conduits and poles for municipal street lighting?

Local Physical Conditions:

(C) The physical installation conditions of a city should materially enter into the economical solution of kind of lighting problem. The relative fixed charges on gas service installation in rock formation would ordinarily be less economical than those upon an overhead arc or incandescent electric lighting installation in the same district.

Low candle power incandescent gas or electric units are generally considered a more practical kind of lighting in a heavily wooded residence district than a flaming arc lamp installation, while the

flaming arc, magnetite, or the high candle power nitrogen tungsten lamp is the only kinds to be considered for large open business street areas.

Scale of Wages:

(D) If the union electrical workers' scale of wages is high in a city it is most likely that more economical lighting can be obtained by contracting the maintenance and operation of electric or gas lamps where the contractor would employ non-union men.

Quality of Lighting

The citizens of one city may demand and their municipal authorities agree to supply a high degree of illumination on congested thoroughfares or a more uniform distribution of lighting units, including the lighting of all alleys, while another city which is satisfied with much less illumination may establish a policy to appropriate proportionately more for policing their streets than lighting them. The solution of this economic problem of the protection to our citizens should be gradually brought about by bettering the "Quality of Lighting" in each city, thereby aiding the present police force rather than by appropriating proportionately more for additional policemen.

Type of Lights

There is little choice between the various standard makes of gas mantles, the gasoline or the tungsten electric lamps, as they have been standardized by the manufacturers and in general give equal efficiencies. It is quite different with arc lamps. During recent years the magnetite and flaming carbon arc lamps have replaced many old inefficient open and enclosed arc lamps in the different cities. Today the large gas-filled tungsten lamps are strong competitors of the modern arcs.

The choice of the type of lamp for each city should be made on the lamp's merits after a thorough study and test of all the different kinds of lamps, suitable for the local conditions, have been completed, including proper height and spacing of lamps. The following characteristics should be considered in fixing the relative merits of the arc lamp: Total light flux, light distribution, light constancy (flicker, etc.), light efficiency, mechanical efficiency, regulation, power factor, accessibility, design, materials, reliability in service and carbon consumption.

The relative merits can be fixed more exactly by assigning a value to the above qualities which would represent the quantitative relation of each particular quality to the sum of all qualities.

Quantity of Lights

The economical quantity of gas, gasoline, tungsten or arc lamps which is to be distributed in any residence or business area of a city should depend largely upon the relation of the total amount appropriated for the installation to that of the uniform quality of the lighting throughout the city.

Philadelphia's 1913 annual lighting cost of \$2,390,069 (when figured on the same basis as most cities), allows proper lighting of alleys, while Chicago could not light the alleys out of the 1913 appropriation of only \$1,493,250 for public street lighting. It costs Philadelphia \$776 a year to light many of its business corners where eight lamps at a unit cost of \$97 per year are installed, while it costs Chicago but \$156 for the lighting of its best lighted corners, that is, two flaming arcs at \$78 per arc on underground construction, which includes maintenance, operation and fixed charges.

A system of rules for the economic distribution of the various kinds of lights in a city should be established and adhered to closely. These standardizing rules would be based upon a proper engineering layout and estimate to cover the entire city, taking into consideration the relation of the following factors: Kind, quality, type and quantity of lights to the available appropriations for the rental or installation and annual maintenance costs.

What has Chicago done to solve economically her street lighting problem? Chicago, with a population of 2,368,672, area of 194 square miles, and with 4,525 miles of streets and alleys, paid \$325 per mile of street and alley for lighting during the year 1913.

1913 Annual Lighting Cost Statistics

	Miles of Streets and Alleys	Total Expenditure for Public Street Lighting	Annual Cost Per Mile of Streets and Alleys	Per Cent Relative to that of Chicago
Chicago.....	4525	\$1,473,127.00	\$325.00	100
New York*.....	3247	3,346,306.00	1030.00	317*
Philadelphia.....	1770	2,390,069.00†	1350.00	415
Boston*.....	568	768,779.00	1353.00	416*

* 1912 figures.

† Cost when figured on the basis of most cities.

There were 40,136 street lamps in service in Chicago on January 1 of this year, 38,240 being the average throughout the year, as is shown below:

		For the year 1913
15930—450-watt, municipal arcs.....	@ \$56.13	\$894,150.90
1772— 80-watt, series tungstens.....	@ 22.62	40,082.64
12769—municipal 50 c.p. gas lamps.....	@ 20.64	263,552.16
907—rented, 450-watt, arcs.....	@ 75.00	68,025.00
6580—rented, 60 c.p. gasoline.....	@ 31.25	205,625.00
282—rented, 20 c.p. tungsten subway lights	@ 6.00	1,692.00
<u>38240</u>		
Total.....		<u>\$1,473,127.70</u>

Take the largest item of 15,930 450-watt, municipal arcs at an average of \$56.13 as an example of what has been accomplished in Chicago by purchasing electrical energy from the Sanitary District of Chicago (a municipal corporation) and operating a municipally owned distribution lighting system.

The total cost of \$56.13 per arc per year consists of \$31.32 cash costs and \$24.81 fixed charges, which includes interest, depreciation, taxes and rent.

The cash costs of \$31.32 per arc lamp per year are made up as follows:

		Per cent of total
Sanitary District power including the operation of sub-stations.....	\$11.44	36.6
Maintenance and repairs of circuits and arc lamps (including trimming and patrolling \$7.85), labor.....	13.25	42.2
Maintenance and repairs of circuits and arc lamps (including carbons \$3.91 and globes \$.42), materials.....	6.63	21.2
<u>Totals.....</u>	<u>\$31.32</u>	<u>100.0</u>

It is very evident from the above items that the electrical energy which amounts to 36.6 per cent of the total cash cost is being supplied at a relatively low rate while the operating labor, 42.2 per cent of the total, is relatively high to that of most cities.

The electrical energy is contracted for at \$15 per horsepower per year delivered to the sub-stations, which, under our operating conditions, means approximately one-half cent per kilowatt hour.

A high union scale of wages is paid all municipal electrical workers in Chicago, including linemen at \$5 per day, arc lamp

trimmers \$100 per month and line repairers at \$155 per month. A study of these factors which make up the cash costs leads one to believe that there should be no reason for cities contracting with electrical utility companies for 450-watt arc lamps at \$90 to \$100 per year, unless the fixed charges on the installation more than double that in Chicago, as most public utility employes are not paid as high a scale of wages.

Chicago's investment per arc light on the underground distribution system amounts to approximately \$510.80, which is the present estimated cost of installing flame arc lamps in downtown streets, laying 4 duct tile, with laterals for 23 lamps to the mile of street. It includes also, besides the underground construction, repaving, sub-station, post, lamp, complete ready to light up. The present average investment of the Chicago Municipal Lighting System for lamps now operating on underground circuits is \$316 per lamp. The investment for the overhead lighting arc system is approximately \$215.60 per arc, making an average investment of \$256 per arc throughout the system.

I know of no electric utility corporation paying as high a scale of wages as the city of Chicago for operating and maintaining its lighting system, and still there are no cities in the country operating under similar local conditions that contract for anywhere near as low rates, but generally 40 to 50 per cent higher.

The city of Chicago makes yearly contracts with the Commonwealth Edison Company for 450-watt flaming arc lamps at \$75 per year for the outlying districts where the lamps are sparsely installed (averaging 500 feet apart) which results in greater investment and higher annual maintenance costs than if spaced an average of 250 feet apart, as are the municipal arcs.

Ten thousand and forty-four of the 17,493 municipal arcs were of the 10 ampere, flaming arc type, 1,261 9.6 ampere, open arcs and the balance of 6,188 being 7 ampere, enclosed carbon arc lamps. The 1,261 open arcs have lately been replaced by 300-watt nitrogen tungsten lamps.

Nitrogen Tungsten vs. Flaming Arcs

About six months ago, after a thorough investigation, we decided to discontinue installing 450-watt flaming arc lamps and to install

in their stead 20 ampere, 300-watt nitrogen tungsten lamps. The favorable results obtained so far from the 1,800 which were installed two months ago lead me to believe that this 300-watt, 600-candle power, nitrogen tungsten lamp, which gives an equivalent illumination to that of the 450-watt flaming arc after the flamer has been in service a short time, is the most economical high power open street illuminant on the market today. When the slagging of the carbons and the etching of the inner globe of the flaming arc are eliminated the arc should be a strong competitor of the nitrogen lamp.

The nitrogen lamps which are purchased under a guarantee of 1,000 hours' life make a more flexible operating system, give a more uniform light and cost less to install and maintain under our Chicago local conditions. It is planned to replace within the next two years the 6,188 7 ampere 450-watt enclosed lamps (giving only about 250 candlepower) with the 300-watt, 600-candlepower nitrogen tungsten lamps, and to extend the system with 5,000 additional lights of this type.

The largest saving in operating the nitrogen lamp under our local labor conditions lies in the trimming and patrolling item.

This saving is brought about by allowing 700 to 800 nitrogen lamps to be kept in repair, cleaned and patrolled by a patrolman who is allowed, besides his salary of \$100 per month, \$3.75 per day for the expense of an automobile supplied by himself to aid in his work, instead of a trimmer at \$100 per month, trimming 330 arcs, and a patrolman at the same wage patrolling 500 arcs, which averages approximately 200 arcs per man for trimming and patrolling, making the relative saving 45 per cent for this item.

Although the cost for four nitrogen tungsten renewals per year (which the manufacturer guarantees not to exceed) is nearly three times the annual cost for flame arc carbons, the relative saving in such items as the cost of power and fixed charges in the nitrogen installation more than offsets this high cost for lamp renewals. It is very probable that the life of these 20 ampere, 300-watt nitrogen lamps will, within a short time, materially exceed the present guaranteed 1,000 hour life, which would result in a still greater saving over that of the flaming arc.

Electric Tungsten Residence Street Lighting

Nearly 100 miles of our best residence streets, which were formerly lighted with 50-candlepower gas lamps, have been relighted during the last two years with an underground, 4 ampere, 80-candlepower series lamp system, at a reduced annual expense per unit.

A large saving was made in this installation by staggering the old gas lamp posts 150 feet apart on each side of the street and wiring them.

Street Subway Lighting

Over 400 street subways running under railway tracks have been lighted by the electrical department during the last 18 months, at an installation cost averaging \$10 per 20-candlepower tungsten lamp.

The standard spacing of these lamps averages one per 400 square feet over the roadway, and one per 200 square feet over the sidewalk area, which makes a well lighted subway.

The Commonwealth Edison Company supplies the energy, renews and maintains these lights under a 5-year contract ordinance and allows credit for all outage of the lamps, at \$6 per lamp per year.

Contract Lighting Rates

The 5-year contract ordinance which was passed by the City Council November 26, 1913, after a thorough investigation made by the city authorities of the Commonwealth Edison Company's books, gives a relatively lower schedule of rates for various kinds of electric service than any of the larger cities obtain by contract, except those being supplied by current generated by water power. The table below gives the relative retail electric lighting rates of electric companies in the largest cities, based upon 2½ hours' use per day of the maximum demand, which is the average for Chicago conditions:

Retail Electric Lighting Rates—Cents per Kilowatt Hours

	New York	Chicago	Philadelphia	St. Louis	Boston	Cleveland	Baltimore
Rate.....	10.0	6.6	10.0	7.0*	10.0	7.2	7.3*
Min. monthly Bill.....	None	None	\$1—except July and August	\$.50	\$9 per year	None	\$12 per year
	Pittsburgh	Detroit	Buffalo	San Francisco	Milwaukee		
Rate.....	10.0	6.7	5.8*	6.7	6.9		
Min. monthly Bill.....	\$.50	\$.50	\$12 per year	\$.75	\$.50		

* Current furnished by water power.

In all of the above cities carbon incandescent lamps are renewed free, except Buffalo and San Francisco.

(The above is based on 1 kilowatt load used 2½ hours per day.)

The two principal causes for these low rates in Chicago are the efficient generating units installed in the large central stations and the high load factor on the stations and system. The load factor has been materially increased by the sale of the power to the street surface and elevated railway lines.

During the year 1913, 929,000,000 kilowatt hours were generated by the Edison Company. The total annual expense of the company for the year was \$10,858,343.26, consisting of \$7,957,299.99 cash costs, \$1,547,127.44 depreciation and \$1,353,915.83 taxes and municipal compensation. This shows a total cost of approximately \$1.17 per kilowatt hour generated and distributed into the lines during the year.

Gas and Gasoline Lighting

While many gas lamps are being replaced in Chicago by electric lamps each year, many gas lamps are replacing the uneconomical gasoline lamps in the outlying territory where the gas mains have been extended. The only expense to the city involved in extending gas services and erecting the gas posts is that for paving over the services. As this amounts to an average of less than \$5 per lamp, a large saving is made by replacing the gasoline lamps with gas lamps where the gas mains are laid.

Gasoline lamps were contracted for this year at \$30.24 per lamp per year, while the annual cost for the gas lamps is \$20.85, consisting of \$9.09 for gas at \$0.80 per 1,000 cubic feet and \$11.76 for the maintenance and repairs.

It will be noted from these figures that 43 per cent of the gas lighting cost is for gas alone, so that a 25 per cent reduction in our gas rate from 80 to 60 cents per 1,000 cubic feet would give about 11 per cent reduction on the total gas light cost, whereas, a 25 per cent reduction in the electrical current rate for arc lamps would mean less than 5 per cent reduction on the total arc lamp rate per year, as the electric energy cost is less than 19 per cent of the total cost.

What steps are necessary to properly utilize all good rate regulation work and improvements which have been accomplished in various cities?

It is my belief that the first and most important step to be taken is that of close coöperation between the various cities, in conjunction with concerted action for fair and reasonable utility rates, as is arranged for by this mayors' conference.

If Cleveland has the most economical water system, Philadelphia the gas lighting system and Chicago the arc lighting system, let us all know the reasons why this is the case, so that the methods used in obtaining good results along these various lines can be tried out and applied in all our cities.

A study of the local utility problems by the municipal authorities of one city in coöperation with those of other cities will prove, among other things, that water rates in many cities could be materially reduced by the installation of meters which would reduce the present misuse and loss of water; that underground metallic work, including pipes and cable sheath, which is being damaged by electrolysis today can be kept clear from damage if proper protective ordinances are passed and enforced; that more uniform and lower telephone, gas and electric light rates could be made in various cities if proper investigations were made of the public utility properties, and that statistics and information upon the methods used in solving such problems as sewage, undergrounding of wires, the continual tearing up of streets and the congestion of traffic in one city should aid all other cities in solving similar problems.

I further believe that the second step should be along lines of organizing national committees, which will work under the direction of the trustees of the National Utilities Bureau as organized, the object of these committees being to carry out the purpose of the bureau given in the program for this conference of American Mayors:

PURPOSE OF THE BUREAU

1. To serve as a national agency through which American cities may cooperate in exchanging data as to rates, service standards and cost factors in municipal utilities.
2. To advise cities as to the best plans and methods for their utility campaigns.
3. To publish and disseminate information pertaining to service standards, rates, franchises, public contracts, and any and all other matters of interest and value to the public, regarding the operation, construction, maintenance and regulation of public utilities.
4. To assist, upon request, in the proper and adequate presentation of the interests of the city and the public in hearings on utility matters before public service commissions or other regulative or judicial bodies.

INTERLOCKING DIRECTORATES

BY LOUIS D. BRANDEIS,

Boston, Massachusetts.

MR. CHAIRMAN, LADIES AND GENTLEMEN: Mr. Wilcox, in his interesting paper, has laid down certain fundamental planks, which should govern the adjustment of relations between the community and privately owned public service corporations. But as Mr. Taylor has indicated those fundamental planks should rest upon justice. And justice can only be attained by a careful regard for fundamental facts; since justice is but truth in action. What those fundamental facts are has been suggested in the very informing paper which Mr. Palmer has just read. They are primarily: (1) the facts relating to the cost of the plant, and (2) the facts relating to the cost of operation. We must have, in order to ascertain those facts, knowledge that is not only accurate, but comprehensive. The instances which he gave, notably the data in regard to nitrogen lamps, show that facts, in order to be useful, must also be up-to-date. As Matthew Arnold said: "Erroneous decisions are more often due to lack of recent information than to errors in reasoning."

Mr. Palmer has also pointed out most clearly how such comprehensive information is to be obtained. It can be done only through a properly equipped bureau; and that bureau must work in coöperation with all those interested. Such coöperation has, in the past, existed and very properly between the public utilities companies. These have long had their associations, and the associations have no doubt aided greatly in promoting the efficiency and prosperity of the separate organizations. But the communities served have hitherto had no means of coöperation. The Utilities Bureau recently inaugurated by mayors of great cities will furnish the instrument through which coöperation of municipalities may become effective. It points the way to efficiency and to justice and must prove of great benefit to all American cities.

But in addition to providing means for ascertaining facts and for disseminating the knowledge gained, it is necessary to establish conditions under which the machinery of the Utilities Bureau can

operate efficiently. We must in other words have conditions consistent with the ascertainment and appreciation of the truth.

In connection with these public utility problems, there is much talk about stock watering. To my mind the real objection to stock watering is not that those who enter upon these enterprises get too large a return. Mr. Guernsey is entirely right in saying that those who put their money into public utility projects should receive as large a return as in other business enterprises involving a like risk. For capital, risk and ability applied to public service corporations must be paid for at market rates. The public interest demands that the rewards should be adequate; otherwise the requisite capital, zeal and ability cannot be secured. My objection, therefore, to stock watering is not that men have thereby obtained in many instances a very large return, but that stock watering tends to obscure the truth. It hides the actual facts as to the amount invested. No doubt promoters of enterprises have often resorted to stock watering for the purpose of misleading the general and the investing public; but in a very large number, perhaps in most cases, the motive has been mistrust of the public. That is, the stock watering device was resorted to because promoters believed that the public would not, if the actual facts were known, allow a just return; because (if the enterprise proved successful) they would ignore the risks which had been taken. Of course the risk incurred is a most important element in determining what the return upon an investment should be. With the establishment of the Utilities Bureau which can authoritatively supply the facts to the public, much of the incentive for stock watering would be removed.

There is another corporate practice which also tends to obscure the truth: interlocking directorates. They are an obstacle to knowledge of fundamental facts, because the existence of the interlocking robs an enterprise of those conditions which under the general laws of business ordinarily lead to the ascertainment of true values. Ordinarily in business the value of a thing or service is determined through the agreement reached by an intelligent seller and an intelligent purchaser—each looking out for his own interest to the best of his ability. Where interlocking directorates or other conflicting interests exist, this protection is lost.

The first step in any enterprise, after it is planned, is the getting of money. Under interlocking directorate practice, the same man

acting as banker sells to himself acting as the public utilities corporation the money with which that corporation is to be established. Then that same man, acting as public utilities corporation, buys from himself, acting as electrical manufacturer, the apparatus which is to be used. Then the same man, having thus bought the apparatus as public service corporation, contracts with himself acting as construction company for the building of the plant. Then the same man, having completed the construction of his plant, and being ready as public service corporation for business, contracts with himself as supply house, for the supplies. And finally this same man, having gotten ready for business as public service corporation, enters into a special contract for power with himself as manufacturer. Now, it is obvious that if the fundamental basis of business is correct, there should be in every trade two sides; men should deal with each other at arm's length; and what are the best prices, what are the best results should be determined by the exercise of two independent minds representing the conflicting interests. The old law that "No man can serve two masters" properly is as applicable today as it was twenty centuries ago.

There is another reason why interlocking directorates must be abolished: namely, the demands of efficiency. Obviously the only justification for the director's existence is that he should direct; which means that he should be an absolutely fair and intelligent adviser and critic of the enterprise. The men who are in charge of an enterprise as executive officers are supposed to manage, and to possess the required energy and determination to go forward. But in a well equipped organization there should be men who will check up the manager's judgment and performance. Only in this way can continued prosperity be assured.

For the proper exercise of the functions of director, it is essential that he be disinterested; that is, be free from any conflicting interest. But it is also essential that he have knowledge. Facts, facts, facts, are the only basis on which he can properly exercise his judgment. It is as necessary that he know intimately the facts concerning the business, as that he have only one interest to subserve. Now, no man can have such detailed knowledge of the facts of many enterprises. This is due to the limitations of time and place and to those other limits set by nature upon human intelligence. How can one man know in respect to many large corpor-

ations the facts which a director needs to know in order to insure efficient management? Though improper motives contributed to the New Haven tragedy, the main cause of the stockholders' misfortune appears to have been the directors' ignorance; and this ignorance was no doubt largely due to the fact that the same men who were its directors held like offices in a multitude of other corporations.

If there were no other reasons against the practice of interlocking directorates the demands of efficiency alone would call for its abolition. But there are other reasons; and there is one other reason which has broad application here. It is this: We must have not only a knowledge of facts, as a basis for doing justice; but we must have conditions under which truth may properly function. We must seek to isolate truth so as to free it from the operation of those forces which would cause a deviation from the true path. Such forces operate sometimes through compulsion, sometimes through influence. We cannot expect to have justice done unless we have a mind that is free to act on such facts as may be presented. We must, therefore, to secure just dealings with public service corporations, see to it that there does not arise in the community affected conditions by which those representing the public are consciously or unconsciously warped in their judgment.

To my mind the gravest objection to the practice of interlocking directorates is that it has created financial power so great that even the best men have found themselves unduly influenced. Such undoubtedly was true in respect to many of the New Haven's operations. There through the interlocking of banks, bankers, insurance and trust companies, railroads, steamship lines, public service corporations, equipment and other manufacturing companies, a power was created so great that the intelligence, will, and character of individuals were powerless to resist it.

What shall we do to meet this situation? Congress, in the Clayton Act, recently passed, has indicated one of the things that should be done. It has declared that the practice of railroads, in purchasing, whether it be money or supplies, or construction, or any other of the elements entering into the building and operation of its properties, from concerns in which its own officers or directors or purchasing agents are concerned, shall cease; and the law makes such transactions a misdemeanor, excepting in those instances when

they are trifling in the aggregate, or where the transaction is effected upon competitive bids and under a condition prescribed by the Interstate Commerce Commission, under rules which would make public all facts. The provisions in regard to this competition are such that there is little likelihood that its privileges will be availed of.

One measure to be recommended for ending interlocking directorates in public utility enterprises, is state legislation of similar character. Another is to develop and utilize the Utilities Bureau. But the great influence which results from this interlocking of relations of the financiers can be fully met only through the widespread coöperation of our municipalities. Let us meet financial combinations by municipal coöperation. When that is done, and not until then, shall we have the conditions under which justice can be done to capital and to the community alike.

OPEN DISCUSSION

HON. P. S. SCANLON, Mayor of Huntingdon, West Virginia:

We were one of the people that first adopted the commission form of government. But I must tell you before I go into the subject who we are and what we have. We have a little city of only about 50,000. That city we have built up in less years than I am old. In forty-two years we have built up at Huntingdon, West Virginia, a little city of 50,000 people; we have 65 miles of paved streets; we have a splendid sewage system; we have a city building and grounds worth \$400,000; we have splendid public streets and general utilities of all kinds that we must have as a municipal corporation, but we are not interested in any of the regular public utilities arrangements.

The reason we are not, I can frankly say to you, is that we have been too busy building up a great city to look after the things that all of the people must have established, rather than a portion of the people.

We do not own our water works; we do not own our street railways; we do not own our lighting plants; and we own no public service arrangements. They are all owned by private individuals or private corporations.

We have four commissioners. One is the commissioner of police and fire; one is the commissioner of health and charities; one is the commissioner of streets and public grounds; the other is the commissioner of finance and public utilities. In this case that happens to be myself. The advantage of a commission like this, governing a city, that has to do with public utilities matters, is that the power is narrowed down; the responsibility is upon four men. These four commissioners make the laws, they execute the laws; they appoint every other officer in the city: they are the only people elected. The responsibility is narrowed down until they have to be good, no matter whether they want to be or not, because you can put your finger upon the number in a very few moments if anything goes wrong.

I said that we had a commissioner of finance and public utilities, and we get closer to our public utilities corporations than the ordi-

nary city that is governed by a council, a large body of men, because we do not send a man down to see the public utilities management, somebody that has been appointed by somebody or elected by the people; we send down the commissioner of public utilities elected himself by the people, who is the government really; he is a part of the government that is narrowed down to such a small compass that it is really the government dealing the public service corporations. That commissioner of public utilities walks in the front door, and asks them for any information, or why the public do not have better service in this, that or the other direction. It is the government itself, I say.

We have no powers as a city commission, with the public service corporation, only as I said a while ago, as the representatives of the community, for we are the representatives of the community.

We have appointed by our legislature, and provided for by a statute law, a public service commission, and we may deal as the representatives of a community, with public service organizations, through this public service commission, and we are dealing as the absolute government every time that we deal. We find that in a good many instances where people complain of municipal utilities that they are not always wrong. Public service corporations are not always corporations that are dangerous to the public interests and the public good. We have found in Huntingdon, where we have grown so fast a city of 50,000 in forty-two years, that we have gotten great service out of the public service corporations in a great many instances and we are fairly well satisfied today.

The time is coming, however, when we are going to own some of the public service utilities. We are treading in that direction. We do not believe that it is necessary to be too rapid about it. We do not care to take over our telephone system; we do not know that we will ever take over our street railway system; we do not know that we will ever attempt to supply the public with gas, and fuel and that sort of thing. We do believe that the community ought to own their waterworks when it gets to a point that it can supply the people at a more reasonable price, at a price that will take care of the expense and finally wipe out the cost of the building.

We believe, too, that it is absolutely necessary that we should probably own our lighting plants, when the proper time comes, not because, my friends, we feel we have corporations among us

supplying that light and water and other necessities that are dishonest and that are wrong, but we find it is better for the community that some of these things should be owned by the community.

I think the advantage obtained through the commission form of government is by the fact that we get so close to these corporations and because we know what they mean. We tell them what they must do, and they do it. We have no representatives of any particular quarter of our city in our government; the four men are elected by all the people of the city; each one is elected by all the people; we have no man elected from this corner to represent that corner or the other corner; we are all United States senators, you know, we are elected by the whole city, and I believe, my friends, that the commission form of government, especially for cities up to 100,000 or 200,000 population, is the greatest thing that ever struck this country.

MR. ANDREW J. GALLAGHER, Delegate from San Francisco, California:

I did not intend to address the gathering, rather have I been sitting here as a very interested spectator.

In relation to the subject which we have under consideration, namely, the public policies as to municipal utilities, may I be permitted to say that experience along the lines of regulation of these utilities has made me an ardent enthusiast for municipal ownership, first, last and all the time?

I have come to the belief that the problem you are discussing here is one which the people will take into their own hands ere long, because of the apparent inability of corporations either to deal honestly by them, or to properly regulate them, and because of the increased belief among people that the best interests of a community are conserved by people owning and operating their utilities.

There is, after all, one great danger, in municipal ownership, and that is the subject of political control and manipulation. I take it that the human mind is big enough to easily master that problem. As a matter of fact, remove politics as we know it and see it operated from the field of utility operation, and the public cannot possibly suffer by municipal ownership. The public service corporations have had every possible opportunity to make friends with the people generally and have failed to do so. In fact now

that the public mind is moving toward acquisition, control and operation of these utilities, there is a frantic endeavor to make friends with the people. But this effort has been made too late, by men who should have known better. The public has, I think, finally made up its mind that the only solution is public ownership. With that principle I am in hearty accord. I am one of those pledged in my own city to bring it about as speedily as possible.

I thank you very much for your attention and for the honor conferred upon me in permitting me to address you. I convey to you the well-wishes of the Mayor and the people of San Francisco.

During the Friday morning session, Mayor Blankenburg proposed the following telegram to be sent to the governors of the states, assembled in their annual convention at Madison, Wisconsin. The telegram was unanimously adopted and ordered sent:

November 13, 1914.

CONFERENCE OF GOVERNORS,
Madison, Wisconsin.

The mayors of American cities, in convention assembled in Philadelphia for the discussion of public policies as to the municipal utilities, send greetings to the governors of the states, assembled in their annual convention for deliberation, among other matters, on the conservation of natural and human resources. The citizens of the United States are to be congratulated upon the fact that at this time of World-War, American city and state executives can peacefully gather for deliberation upon such subjects as conservation of our resources, the protection of our citizens, and proper public policies regarding municipal utilities, affecting as they do the stability of over ten billion dollars of capital and the personal daily welfare and efficiency of over sixty million urban and suburban residents. May public policies on all these questions be ever such as will at once conserve moneys actually invested, further industrial development, reserve to cities adequate powers, and protect the best interests of the rank and file of American citizens.

RUDOLPH BLANKENBURG, *Presiding.*

During the next day the following telegram was received:

Milwaukee, Wis., November 14, 1914.

CONVENTION OF MAYORS,

Care of Mayor Blankenburg, Philadelphia, Pa.

Your telegram received with much appreciation. The governors assembled send greetings and wish you a most successful meeting.

FRANCIS E. MCGOVERN,
Governor of Wisconsin,
Chairman, Executive Committee.

THE REGULATION OF PUBLIC UTILITIES

CARTER H. HARRISON,*

Mayor of Chicago.

How shall we control our public utilities? This is the question American municipalities must ask themselves, the question they must answer.

In the old days the utilities controlled the municipalities. How, was not a difficult problem. The method can easily be traced in an investigation of the expense account. In recent years there has been an awakening on the part of the public; this has had the tendency to relegate the utilities to their proper position of servants instead of masters of the people.

A new view of the relationship of the utilities to the communities in which they do business is in vogue on the part of the public. And by the same token a new method of meeting the changed conditions is in vogue on the part of the utilities.

The utilities are with us. They form an integral part of the mechanism of modern community life. How shall they be so controlled and regulated that the new methods they employ to gain the old ends may be met and checkmated?

I shall not attempt a scientific answer. Nor shall I discuss the question except in the light of my personal experience and as I know conditions in my own city. No word that I may speak is intended to apply to any community other than my own. I propose to leave scientific discussion to the experts, to attempt individually a categorical answer based upon the every-day phases of the problem with which I have been brought almost daily in contact. It might be well to remember, however, that Chicago's problem and difficulties differ but little from the problems and difficulties that harass other cities.

To some my statements may seem harsh and intemperate, far fetched and flimsy, unjust and radical! My apology must be that

* Remarks as Presiding Officer, Session of Friday Afternoon, November thirteenth.

for well nigh twelve years, during which the old order has passed away and the new order has made itself felt, I have been part trainer of a large and lusty public utility menagerie.

The experts have figured the whole thing out by the rule of three. Regulation is the thing. State regulation is the panacea offered by the one group, home rule or local regulation the cure-all insisted upon by another group. The expert, however, fails to take into consideration the human equation. And there is a human equation to be considered in this as well as in all phases of human life.

Utility corporations are not organized as eleemosynary institutions. Corporations are artificial entities, but their component parts are individuals. A corporation possesses just a little bit more human nature than in the aggregate is in the make-up of all the individuals that compose it. The officers and directors of a corporation reflect the human nature of the stockholders; they are guided by the same lights, swayed by the same motives, only more so. They hold place for one purpose, to show tangible results. Tangible results are needed to satisfy the cravings, to sate the appetite of the individuals they represent.

Profit is the aim of the utility corporation. The length to which public utilities are willing to go for the sake of profits was seen in the days when they were masters and the people were slaves. In the mad chase they over-reached themselves. Even an American public with all its indifference, with all its monumental patience, with all its proverbial long suffering finally rose in its might and asserted itself as master.

While the utilities have tempered their methods to the new public attitude, profits are as eagerly sought as ever. High finance may not be quite as arrogant, as self assertive, as ruthless as in the days when captains of industry were in their flower, but it would be a bold man to assert that devious methods have been abandoned, that altruistic methods have been permanently substituted in their stead.

It is in the human equation that the public danger lies. In the hey-day of high finance, officials elected by the people forgot to whom their allegiance was due. They took their orders from the utilities—for a consideration. If the consideration was great enough the heavenly void alone bounded the limit to which they were prepared to go.

Within sixteen years I have heard an alderman on our council floor exclaim to a confrere "Why! You'd take a hot stove!" and the accused did not deny the soft impeachment. When the question of raising an alderman's pay from \$3 a meeting to \$1,500 a year was under discussion, an alderman arguing for the higher pay from the floor of the council asked plaintively: "How can an alderman stay honest on \$3 a week?" and the question remained unanswered. Philadelphia was considerate enough at one time to loan to Chicago, Charles T. Yerkes, until we made him pack his baggage and move to London. I have seen him seated in the great corridor outside the doors of the House of Representatives of the state of Illinois sending for his lieutenants, leaders of both parties among the legislators, giving his orders, outlining his strategy like the veriest war lord on the field of battle. I have heard state legislators in public places recount as the joke of all jokes how a country representative accepted \$300 for his vote when \$3,000 was his allotted portion.

These were the days of rough stuff and raw work, yet these days are removed from the present by the brief space of sixteen years only. Are we to believe that the muckrake in its purifying process has gone below the surface until all the weeds have been uprooted, are we to believe that all the seed are destroyed? Or are we to recognize rather that there has been a change in strategy, that the public must be prepared to defend itself along a new line of attack?

When high finance was king franchises were bartered away without a saving clause. Improvements, betterments, service, lower rates were left to the tender mercies of the utility concerns. The abuses led to a demand for control, for regulation. In the case of Chicago the first remedy sought was increased power over utilities. The legislature was asked to give to municipalities plenary powers to deal with their local utilities. The utilities began to worry. They cried out against unjust regulation tantamount to confiscation. Local powers, it was proclaimed, should be curtailed rather than enlarged. To give a municipality complete control of its utilities would fall little short of establishing anarchy.

Anarchy, by the way is a lovely word for the utility mouth to conjure with.

The people, however, were wide awake; they refused to be stampeded. The corporation officers read the handwriting on the wall.

Regulation was imminent, indeed, had arrived. What was the best regulation for them? Why, state regulation, of course.

Here is where the human equation comes in.

A state commission is a small body. Control by a single small body from the standpoint of the public service corporations is far preferable to a control centered in each individual community. A lot can be said for it unquestionably. Scientifically the arguments advanced for it are unanswerable. Opposition would seem inexcusable, were it not for the human equation which must not be ignored.

State commissions are appointed by a governor. A governor is subject to all the human weaknesses. He may be absolutely honest, but a poor judge of human nature. He may be quite incorruptible, but subject to political pressure. He may be inexorable to political demands, yet yield to personal influence and persuasion. The men that constitute the commission when appointed are subject to all the frailties to which mankind is heir. A first commission may challenge criticism, but every once in so often it must be reappointed, or new members must be named to take the place of those whose time has expired, whom death may have removed, whom untoward chance may have incapacitated for further service.

Of a local commission, appointed by a mayor under the so-called home rule policy, the same criticism may be made, but let it be remembered that the personal responsibility for his appointments will weigh more heavily upon a mayor, who can be called up with a sharp turn by his constituency for failure of his commission to heed a righteous public demand, than upon a governor, who is responsible to a larger constituency, all of whom are not personally interested in each decision or finding of a commission.

This argument is most unscientific I am constrained to admit. The citizens, however, are more interested in good service and cheap rates than they are in the securing of these benefits by methods of scientific accuracy. Results are what the people are after, not a scientific method of regulation, approved of by the up-to-date expert, which exhausts itself in red tape, and leaves rates high and service poor.

Again there is the home rule scheme that leaves control and regulation absolutely in the hands of each community's elective officials. Until eighteen months ago this was the method we employed in Chicago, where the gas, telephone, electric lighting, sur-

face and elevated traction service are in the hands of private capital. Chicago owns its water system, thank God! Its service is magnificent, its operation most profitable to the community.

In the good old days Chicago had no regulation. The corporations carried their extortions as far as they dared without running the risk of being lynched. The public finally worn to exasperation demanded relief. How the fight was fought, how the victory won is too long a story to be recounted here. A good fight was fought with the result that must attend any honest, determined battle for the people. The people won.

A vexatious dispute with the surface traction companies, extending over ten long years, was settled on a basis that gave with a vastly improved service a division of the net receipts between the companies and the city.

Since 1907 the city's share has amounted to the comfortable total of \$13,027,884.82, with one-half of the present year yet to be heard from. Gas rates are 80 cents a thousand with a rate of 68 cents fixed by the city council now being fought in the courts. Electric lighting and power rates compare favorably with the rates in force in most cities and the same may be said of telephone rates.

In fact Chicago's method of dealing with the utility question apparently has been too successful to meet with unqualified approval in quarters where dividends are more important than good service and low rates. When it became evident that some concessions must be made to the people, the wise men, who do the thinking for the utilities, devised the scheme of state control, a control far removed from local influences. In the last session of the Illinois legislature a state commission was created and to it was given the complete control of all Chicago's utilities. The personnel of the commission that has since been appointed is satisfactory.

Now to my way of thinking state control is better than no control. Local control is better than state control. It may not be scientific to let each community grapple with its own problems, but this is the method that finally brings results. The utilities have their protection in the courts against too drastic action. All regulation must be reasonable. The people are entitled, however, to the best service at the lowest rates that will make a utility investment reasonably profitable. The most valuable commodity the utility possesses is the right given it by the public to use the com-

munity property in streets and alleys. In the early days when gas, telephone, electric and traction service were unknown quantities, when the infant utility was taking a chance of possible failure, the investor was entitled to extra returns for the hazard. Today these utilities are entitled to a fair profit and no more. Returns are as certain as interest on government bonds. Extra profits should cause extra dividends to be declared, but the extra dividends should be in favor of the public in increased service, reduced rates or cash compensation.

But better than either state control or local control is public ownership. Many, probably the great majority of communities, own their water works which are operated profitably. Operation in all likelihood would be conducted on a more scientifically economical basis with private ownership, but who would reap the benefit? Not the public, except when by a bitter fight improved service and low rates could be forced, not the employees whose wages would be held down to the lowest notch, whose working conditions would be made most onerous, not these but the fortunate few who might happen to be the lucky stockholders of the utility.

A great good would come from public ownership of all utilities in the tremendous responsibilities of local government. These responsibilities would demand imperatively increased attention to civic duty by all classes of citizens.

The indifference of so large an element in each community life to the character of officials and to the service they render is the greatest present obstacle in the path of good government. Nowadays the controlling policy is that of *laissez aller*. "What is the use?" says the prosperous business man on election day, when he passes up his voting privilege, seizes his golf clubs and goes to the country to avail himself of a holiday. Let a municipality operate all its utilities and self interest will induce each citizen to take a more active part in the affairs of local government. He will awake to the realization that American citizenship is not a mere perquisite, that it is a duty, a responsibility, an obligation.

The first requisite of public ownership is a rigid civil service, which appoints, holds and promotes absolutely on merit. Without it public ownership would be a public disaster. With it public ownership would be made a tremendous blessing to every community. The best of service at the lowest paying rate, the highest of wages and

the best working conditions would still leave enough in the cash box materially to reduce the burden of general taxation.

The favorite argument against public ownership is that it would be uneconomical. Wherein lies the economy of private ownership as the thing works out in every day life? In poor service, high rates and low wages.

Under private ownership, if an extension of a utility is asked the first and foremost question is, will it pay? Under public ownership the question would be: Will the general benefit, the development of a new district, the increased value of property be enough to offset the temporary excess of cost over income?

The greatest benefit to a community comes from home life, the greatest danger from the congestion, the overcrowding, the insanitary conditions developed by tenement life. The home, to be available for the struggling masses, must be a cottage or a flat in the outlying districts. To be available for use it must have transportation, water and light. While a neighborhood is in process of development the revenues from these sources would be scant. Private ownership would hold back, would await the slow building up. Public ownership would jump in to make a district available for residence at once, would stimulate its growth even at a present loss.

The proponent of private ownership rails against the labor unions, their constant demands for better hours, better working conditions, better pay; the tendency under public ownership, he tells us, would be to give heed to these demands. The electric lighting company in my city is operated on the open shop basis; the wages it pays are less than what public institutions pay for the same class of work. Public ownership we are told would increase these wages and make the operation uneconomical.

I am one of those who believe in a more even distribution of this world's goods than is enjoyed under our present system of society. There is no terror for me in the idea that the wages of the American working man are slowly but surely going up; that his hours of labor and working conditions are steadily improving.

That would be the ideal country in which there were no multi-millionaires but many well-to-do, in which every working man of industry and sobriety received a wage upon which he could live in comfort, educate his children, give his family some of the luxuries

of life, and lay by provision for old age and for the rainy day that seems sure to come in every life. Let the public set the good example of paying the laborer and mechanic an honest wage.

Take away private ownership of public utilities and you will have removed one of the principal causes of and incentives to corruption, to the seeking of public office for the purposes of corrupt gain, to commercialism in politics. Do away with the contract system of performing public work and establish the direct labor plan. Then you will have gone far towards making public office unprofitable for the grafter and the spoilsman.

Finally establish the principle of non-partisanship in all local affairs. Reduce the number of elective officials. Compel each candidate for public place to submit himself upon his merits, divested of the name, the support and the backing of a great political party. Fight out local fights on local issues.

These things will aid in making public service, however insignificant, so honorable that it will be eagerly sought by every man.

SOME PRESENT-DAY ISSUES OF PUBLIC UTILITY REGULATION

BY EDWARD W. BEMIS,

Member of Advisory Board, Valuation Department, Interstate Commerce Commission; Board of Supervising Engineers, Chicago Traction, Chicago, and Director of Valuations for the District of Columbia.

Ten years ago no state save Massachusetts had a commission empowered to deal with municipal utilities, although many cities were beginning to avail themselves of the power they were just discovering they had, or which they might obtain through home rule charters, to demand reasonable rates and service from the public utilities within their borders.

Our cities were discovering that if, through their city governments, they made somewhat extensive investigations of the subject, and acting on such evidence, ordered a reduction of rates, certain important results were likely to follow; either a company would accept the order, in the original or in some modified form, or it would take the case into the courts. There the judges, not wishing to overthrow a coördinate branch of the government, held that the burden of proof was with the company. The latter must convince the court by positive evidence that the city was wrong, and even then if some doubt remained, the court might order a trial of the new rates for a year or more. If the court decided against the city the latter could appeal to the higher courts, just as, if the conditions were reversed, the company could do.

Any return equal to $5\frac{1}{2}$ per cent or 6 per cent in the East or 7 per cent in the West was usually considered by the court a sufficient return to establish the legality of the city ordinance. Chicago, Indianapolis, Des Moines, and Cedar Rapids, I., were moving in this direction and our public utilities were becoming alarmed. Realizing that monopoly charges are analogous to taxation, they saw no reason why both should not be equally fixed by government and by that government nearest to the business paying the tax or imposing the rate of charge.

Meantime a current toward municipal ownership was setting in. Mayor Johnson, of Cleveland, through a quasi-municipal railway

with three-cent fares, was forcing a big monopoly of that city to terms which have resulted, even under continued private ownership, in universal three-cent fares throughout the city for the past four years. The recent rapid growth of a competing municipal plant is now greatly reducing electric light and power charges in that progressive city.

In 1907, the famous investigation of municipal ownership in this country and Great Britain by the National Civic Federation resulted in conclusions which I had the honor of assisting to prepare, which read as follows:

We are also of the opinion that all future grants to private companies for the construction and operation of public utilities should be terminable after a certain fixed period, and that meanwhile cities should have the right to purchase the property for operation, lease or sale, paying its fair value.

To carry out these recommendations effectively and to protect the rights of the people, we recommend that the various states should give to their municipalities the authority, upon popular vote under reasonable regulations, to build and operate public utilities, or to build and lease the same, or to take over works already constructed. In no other way can the people be put upon a fair trading basis and obtain from the individual companies such rights as they ought to have. We believe that this provision will tend to make it to the enlightened self-interest of the public utility companies to furnish adequate service upon fair terms, and to this extent will tend to render it unnecessary for the public to take over the existing utilities or to acquire new ones.

This endorsement of the right to have municipal ownership as more effective than any form of regulation was not only approved by men on the commission who were recognized as taking the public point of view, such as Dr. Milo R. Maltbie, of the Public Service Commission, First District, New York; Prof. John R. Commons, of the University of Wisconsin, and of the United States Industrial Commission; Prof. Frank Parsons, of the Boston University Law School; and Dr. Albert Shaw, of the *Review of Reviews*; but by the then president of the Big Four Railroad, Melville E. Ingalls; President Charles L. Edgar of the Boston Edison; W. J. Clark, of the General Electric; Prof. Frank J. Goodnow, now president of the Johns Hopkins University; Prof. John H. Gray, president of the American Economic Association; Dr. Talcott Williams, formerly editor of the *Philadelphia Press*; Walter I. Fisher, later Secretary of the Interior, and others. Of the entire committee of twenty-one, only Walton Clark, vice-president of the United Gas Improvement Company, refused to sign this striking statement.

The public utilities felt that something must be done to prevent cities either from turning to municipal ownership, or from using the power of regulation they already possessed or that they might obtain from state legislatures.

New York state, which had given its cities no powers of regulation, and where municipal ownership was scarcely developed at all, had at this decisive moment a governor who believed that regulation was necessary, and who thought that it could be secured by a state commission with large powers, and with a high grade of men appointed by himself. The commissions which Governor Hughes thus started on their career were composed of strong men, and the example of New York was quickly taken up, under similar conditions, by Governor LaFollette of Wisconsin and Governor Wilson of New Jersey.

With public utilities able to quote such illustrious converts as have been mentioned, the advice of the National Civic Federation commission of 1906-1907, above quoted, and the opportunity of cities through home rule to develop local regulation subject to court review were ignored, or forgotten. Today we have twenty-six states and the District of Columbia where public utilities are regulated by commissions. Scarcely a half-dozen northern states east of Utah have kept out of the procession, and several states might be mentioned in the far West and South, whose utilities are thus regulated. Efforts are being made everywhere else, by the utilities, to obtain similar legislation.

The tendency of a few years ago toward home rule in the regulation of these monopolies has been temporarily checked. Municipal ownership, also, for a time, seemed to be side-tracked, although of late the development of municipal street railways in San Francisco and of municipal electric light and power in Winnipeg and Cleveland, to say nothing of gas and electric light in smaller places, and the recent defeat of the movement for state commissions in Iowa and Minnesota, indicate that state regulation is not found to be as popular as was generally expected.

Meantime the growth of these utilities has been remarkable. The sale of artificial gas has more than doubled in the last ten years. The sale of electric light and power was over four times as much in 1912 as in 1902. The number of passengers carried by street railways more than doubled in the same ten years, while the esti-

mated number of telephone messages was nearly three times as large in 1912 as in 1902. State commission regulation is now with us in most states. It can give us publicity and uniformity of accounts, tests of service, and many other benefits. We accept it where in vogue, and in this paper we consider how to meet some of the problems involved.

I. The failure of cities to realize that commissions tend to assume the attitude of courts, and to be influenced by the relative weight of evidence, rather than to become independent investigating bodies. Cities must learn that in order to win their cases before a state commission they must prepare their cases even more extensively than is necessary before courts. The latter, as already indicated, almost always declare the burden of proof to be on the utility that opposes the action of a city government. A state commission, whose creation is often avowedly to enable utilities to escape from local control, is not inclined to put the burden of proof upon a utility. Moreover, in some states a city cannot appeal at all to the courts from the decision of a state commission, while companies can always appeal from a commission as freely as a city can appeal from a lower court to a higher court in states where there is no state commission.

It is but human nature for a commission to consider the case of a city as weak where that city does not devote a quarter as much of the intellectual energy and financial resources to the presentation of its view as does the utility in the presentation of its side of the case.

Until cities are ready to wake up, we may well note what Maryland is doing in having a special state attorney to represent complainants in public utility cases. In that state, also, the attorney for the people is sometimes able to secure (as in the Consolidated Gas and Electric Light Case, of Baltimore) state funds for the employment of experts. That, however, could be improved by having the special attorney the direct appointee of the governor. But nothing can well remove the great desirability of direct city participation in a large way in the bringing of cases concerning the locality before the state commission. The evidence of strong local support of a case brought before a commission by a city cannot fail to have weight.

II. The personnel of these commissions is of the greatest importance. The problems presently to be considered require not only

wide training and breadth of view, but also a high regard for the ethical side of these great questions, and for the public standpoint. A great commissioner, like some of those who have sat on our best commissions, must possess keen powers of analysis and courage in support of the common weal.

If this commission regulation continues, we must select our governors with as much reference to the likelihood of their appointing the right class of public utility commissioners as with reference to all other appointments, or to their general executive policies. The way some of our most famous commissions, starting with splendid material, have steadily degenerated through a succession of appointments pleasing to the politicians or corporations is a significant comment of the oft-quoted argument that commission regulation means the removal of public utilities from politics.

III. The methods of determining the amount of property on which a reasonable return should be earned cannot be too carefully studied by all lovers of fair play. Deprived by our courts of the right to earn on franchise values, our utilities are now everywhere making stupendous efforts to establish before all regulating bodies that the cost of replacement today of the existing property should be the only matter considered, to the entire exclusion of the actual investment or cost of the property. Does the utility occupy, for example, a considerable amount of land which becomes more valuable for sale from year to year although not for public utility purposes? Then the utility demands the right to raise the price of its product or service to keep pace with the increasing value of its land. Has the utility laid mains and conduits in advance of city paving? It now demands the right to increase its charges above what they would otherwise need to be, in order to earn on the cost of cutting through the paving, if an imaginary new plant were now to seek to duplicate these mains and conduits in their present location. Has the price of labor and materials risen? Then up must go the charge for the commodity, even though the buildings and plant were built before the rise in prices. Has the utility a large and profitable business which it obtained through the growth of the community and through canvassing and advertising, properly charged at the time to operating expenses and paid for by the consumers or subscribers? The utility now demands the right to earn, not on the actual cost properly chargeable to capital that was secured to develop

this income, but on the cost of duplicating it today, in a so-called hypothetical or comparative plant.

The number of unearned increments which can thus be claimed and, alas!—often secured, by a municipal monopoly in a rate case is enough to make Henry George's ideas of the unearned increment of land alone look small indeed.

Far be it from me to reflect upon many engineers who estimate the cost of reproduction of public utilities, but some of our most famous appraisal engineers richly deserve the criticism which the California commission gave last July, in the Monterey Gas and Electric Light Case. After calling attention to the allowance in this case of about 41 per cent for overhead charges and going value, by a prominent firm of engineers, the president of the California commission, John M. Eshleman, stated:

I cannot see why a public tribunal should be criticised merely because of the fact that it is awake to a program that is being conceived and carried forward before its very eyes. That there is a program on the part of large financial concerns interested in public utility securities, particularly in the stock of public utilities for which ordinarily no money has been paid, to exaggerate the value of the property of these public utilities, in my opinion, admits of no doubt. That their procedure is but natural makes it none the less necessary for the public authority to be on his guard. These interests find themselves in the following condition.

The uniform practice has been in the past to construct their properties largely from the proceeds of bonds, and to give as bonus the stock of the corporation, except that which should be withheld by the promoters. Thus the actual property cost originally has been less than the face value of the outstanding bonds—to say nothing of the stock—because under this method bonds are usually sold at less than par. The problem of those in control, therefore, has been to pay the bond interest and gradually build up a value behind the stock which originally, of course, had no value. Now they find themselves halted in this program in many instances, and by valuations by commissions the real relationship between the obligations and the assets is disclosed. Almost frantic endeavors, therefore, are being made to persuade public authority to place values upon the property for these utilities which shall be sufficient to cover the bonds and leave, if not enough to represent par for the stock, at least enough to represent something, otherwise such stock will be seen to have no value. Furthermore, many of these utilities expect, and I imagine a great many desire, public ownership of their properties. In anticipation of such public ownership, in rate investigations they do not have the rate inquiry alone in mind, but with an eye to the future seek for this reason, too, to import elements of value that have no other foundation than in the desire of the utility to get the highest possible price for its property.

(*City of Monterey vs. Coast Valleys Gas & Electric Co.* decided June 30, 1914, on Rehearing, Decision of July 30, 1914).

How some of our public utilities look upon our present commissions was well illustrated by the remark of the engineer of one of our largest public utility syndicates at a public meeting of a prominent engineering society last year. He said: "I think that commissions are now regarded by the privately-owned properties much like a wild animal that has been tamed. He behaves as a domestic animal at this time, but one cannot tell when the call of the wild may cause him to turn around and bite them." The view of the matter from the public side was vigorously expressed to the speaker at one time by Governor Pingree, of Michigan. Commenting upon a sentence in the annual report just received from the state railroad commission, to the effect that they were glad to announce that their relations with the railroads had been most "friendly" the previous year, the sturdy governor burst out with a formidable expletive, and said: "They have no business to be friendly!" We may not, indeed, wish our commissions to be always on the warpath, but it is still more certain that we do not want them "tamed."

IV. Going value, reserves, and surplus earnings present big problems. Our courts, fortunately, with the exception of New Jersey, have not endorsed a going value, except where early failure to earn a reasonable return was not made up by any later earnings in excess of such a fair rate, and many courts, including the United States supreme court, have not even then admitted a going value in rate cases. The courts that have allowed a going value equivalent to early deficits not made up by later surplus earnings, as in the case of the recent decision of the New York court of appeals, in the *Kings County Lighting Company v. Wilcox*, in March, 1914, have apparently failed to realize that if the company can capitalize in a rate case any deficits in earnings, it is also fair, where a surplus has, on the whole, been earned over and above a fair return, that the public should have the benefit of that surplus.

The Massachusetts Gas and Electric Light Commission contended for this in a very important gas case in Haverhill. That company claimed before the federal court last year that it could not reduce the price of gas to 80 cents as ordered by the state commission, unless it should forego profits on a portion of its property

which had been built up out of surplus earnings. The state commission frankly admitted this, but contended that the company was not entitled to a full return, and perhaps very little if any return on capital built up out of surplus earnings over and above good dividends. After months of expensive litigation the company, in the early part of this year, dismissed the case before argument, and accepted the price of 80 cents which was in controversy.

In most states, however, companies not only claim a return of 8 per cent or more on their surplus, but a similar return on the funds they have collected from the subscriber or user, to meet depreciation, even though the amount of yearly addition to the depreciation fund has been determined by the amount necessary in case no interest is earned.

If an old and well established company has poor credit, on account of watered stock and bonds, and so has had to pay a considerable discount in order to sell its securities, it asks a correspondingly higher price from the public utility to make up for its own lack of credit. If it prefers to sell 5 per cent bonds at a discount of 5 or 10 per cent instead of $5\frac{1}{2}$ per cent bonds at par, it still demands an 8 per cent return on the discount paid, as well as on the money secured.

It will at once be seen that the public needs, in order to meet these complex problems, not only its best legal, engineering and accounting talent, but the services of its best economists and students of public policy.

V. The apportionment of rates between various classes of electric consumers should not always be according to cost of service. Small consumers may well be asked, as in gas and water, to pay less than cost, but the limits of time set for this paper prevent the discussion of this important subject.

VI. The virtual if not legal validation of all our watered securities under the guise of state approval of new securities is another serious menace. It is possible to conceive of helpful state control and publicity with respect to new securities, but what is actually going on is startling: Many of our commissions, without any investigation at all, in some states, and in other states with no investigation worthy of the name, are giving a perfunctory approval to the issue of hundreds of millions of dollars of securities. These are at once advertised as approved by the state. They are usually thrown

into a common pot with the old stocks or bonds of the same class. Either false hopes are aroused among investors, or the danger arises that the courts will hold that a genuine class of innocent investors in watered securities has been created by state law. The courts of late years have come to ignore, as of no significance, outstanding stocks and bonds in rate cases. What they may do under these crude laws and cruder enforcement of them is problematical. One state commission has approved hundreds of millions of securities without any investigation. Another thus recently approved \$26,000,000 on the first day of its life as a commission.

VII. The relation of regulation to municipal ownership. Commission regulation must be divorced from interference with the charges and administration of municipal plants, except in the requirement of publicity and uniformity of accounts. As long as cities, through proper state supervision of accounts, know what their plants are doing, they should be free to run them at a profit or loss, and with such an apportionment of rates between different classes of consumers, as local public opinion demands. The right of cities to follow Cleveland's example in establishing its own utilities must be left as free and unrestrained as throughout Ohio, and during the past year in Illinois. Sandusky, Ohio, would have waited for years to secure through a state commission what the people, through a mere threat of municipal competition, have secured this year from a private company, *viz.*, a maximum charge of 7 cents and a secondary charge of 4 cents for electric light.

VIII. Syndicates of capital must be met with syndicates of cities. A dozen syndicates such as The United Gas Improvement Company, The American Light and Traction Company, Stone and Webster, and those controlled by Billesby, Doherty, and Insull, seem bound upon putting any amount of money into a local rate case in order, as was baldly stated three years ago in Des Moines, "to teach city councils a lesson," and to secure from commissions and courts, before it is too late, the endorsement of corporation theories with respect to going value, replacement costs, rate of return, etc.

The leading expert for privately owned gas companies, Mr. Humphreys, told the National Association of such companies, The American Gas Institute, last month: "It is up to the Institute to educate these commissions."

City attorneys, no matter how strong as lawyers in general

practice, are not in office long enough to warrant such specialization upon public utility matters as is practicable for our larger corporation attorneys. Through fellowship in the common purpose, the attorney of one utility syndicate is kept informed of the testimony taken in cases involving other syndicates. Each city, on the other hand, approaches the subject of regulation as a new proposition. With the multiplicity of commission and court decisions and public utility discussions before engineering and economic bodies, it is becoming every month more difficult for a new student of the problem to put himself abreast of developments in the short time of preparation possible to him.

The time was not entirely ripe for the movement in 1900, when it was my fortune to assist in starting the bureau of economic research, in New York City, with the help of V. Everett Macy, R. Fulton Cutting, Tom L. Johnson, W. J. Gaynor, Bird S. Coler, George H. Shibley, John R. Commons, and others, out of which organization developed, in other hands, the quite different bureau of municipal research. The time seems now at hand, for an organization such as is here proposed. If the movement is to have any permanent result, other than general education, which of course is in itself valuable, it must be kept absolutely divorced from the building up of any man or administration. To this proposition those who have called us together agree. The organization must likewise be effectively officered and strongly supported.

That such a gathering as this could be brought together without being financed by any public utility is itself evidence of the growth, during the past five years, toward a settlement of the great problems we are now considering. May we prove equal to the task of dealing with them with that disinterestedness, sanity and good sense which the times and these problems demand.

WHAT CERTAIN CITIES HAVE ACCOMPLISHED WITHOUT STATE REGULATION

BY STILES P. JONES,

Secretary, Voters League, Minneapolis, Minnesota.

The list of cities that have achieved something worth while in the way of regulation of their utilities is a fairly long one. There is time here but for a review of the main facts of the larger successes of but a few.

Admitting that state regulating commissions have been of substantial service to communities struggling with public utility problems, the bald fact yet persists that it is in cities that have worked out their own salvation that the largest degree of success in rates and service has been achieved. Success in this field, however, cannot be wholly expressed in terms of rates and service. But I emphasize these first, for, quite humanly, they are the things in utility regulation that appeal most strongly to the public.

In those cities having the lowest rates for public utility service, it is a significant coincidence that they have been secured through the initiative and by the sole efforts of the community itself unaided by any agency of the state. In many cases the same may also be said as to the character of service rendered. And, contrary to modern theory of the proper thing in utility regulation, the results came through competition—competition forced upon the community either by the excessive rates charged by the existing company, or by unsatisfactory conditions as to service, or both. The methods may not have always been “scientific” from the standpoint of the regulation expert, perhaps sometimes of the rough and ready, or rule-of-thumb sort; but it is not with methods that we are concerned here, but results.

I would not have it understood that I regard the results as to rates and service as the only results, or even the chief results, of community control of public utilities. The greater results are seen in the educational effect upon the community and the preparation it furnishes for the time when public utilities must and will be taken over for community operation. Disinterested students of the public

utility problem should see by this time that there is but one logical and one correct solution of this great problem—that public utilities must become *in fact* public utilities, publicly owned and operated. This not alone to assure proper rates and service, but to divorce a necessary public function from the sordid motives of private interest and to remove the main contributing cause of the corruption and inefficiency of our city governments and the demoralization of the political life of our urban communities.

Vesting in the state the regulation of the cities' utilities seems to me nothing less than a weak and cowardly dodging of plain civic duty and responsibility. The effect must inevitably be the same upon the community as on the individual—the loss of will and purpose and capacity to do other things. Municipal ownership has not come to our cities, and will not, through the route of state regulation, no matter how efficient in the public interests that regulation may be. In fact, the greater the efficiency the more distant the final day of public ownership. Municipal ownership is coming rather through the trials and experiences of a city wrestling bravely with its own problems, working them out in its own way, be it good or bad for the time being, and fitting itself, through that experience, for the final step—the step which will end the long night of conscienceless exploitation of the most valuable resources of our cities and the debauching of their public life to make private profits.

What more fitting preparation for the responsibilities of that final step than the actual experience contained in the control of its utilities directly by the city? What better training for meeting successfully the other problems of city administration? And what more certain method of developing civic sense and responsibility and educating the citizens to work together for the common good?

Let me review at this point some of the larger achievements of cities and offer them in evidence of their capacity to protect the public in utility controversies.

My own city of Minneapolis offers interesting testimony of notable results secured through community initiative and perseverance. These results are particularly in evidence in the gas and street railway fields.

The controversy with the gas company over the renewal of its franchise in 1910 ended with the acceptance by the company of a contractual ordinance which, in its time, was considered by experts

to be in many respects a model of what a franchise contract ought to be. It had the defect of not including provision for purchase of the property by the city during the life of the contract and it was without provision for amortizing capital; but otherwise protected public interests well.

Under the terms of this contract the city enjoys an average rate of $77\frac{1}{2}$ per cent per thousand feet for the five year period ending April 1, 1918, with full publicity of accounts and operations and an eight-hour day and fair wage conditions for employees. Note the regard evidenced here for just industrial conditions among employees. The rate made for gas for this period was a comparatively low one considering the then cost of material entering into the manufacture of gas in the Minneapolis territory. The negotiations covered but a few weeks. The accompanying regulatory ordinance requires the company to maintain a monthly average of 600 B.T.U. as to heating efficiency, with present pressure requirements of two to four inches. This undoubtedly is the most efficient pressure standard in the interests of consumers maintained anywhere in the United States. These service standards were reached promptly and enforced to the letter ever since by a fearless and vigilant light inspector. This speedy action in reaching results as to service standards is in marked contrast to the situation in some of the states where state regulation prevails.

Street railway service in Minneapolis is admittedly equal to that of any in the country. The rush hour period—the weak link in the operation of so many companies—is particularly well cared for. This condition was not created voluntarily by the company, but forced upon it by the aggressive attitude of the council. The so-called strap hanger ordinance, adopted in July, 1911, making a standard car load to consist of one and one half the seating capacity of the car, was the beginning. Enforced vigorously from the start, the result was to force into service a sufficient number of new cars to meet reasonable requirements of service.

A city inspector checks up the situation on each line constantly and additional cars are ordered into service as fast as needed. He is responsible to the city council. Behind the council is the stimulating corrective of public sentiment, unceasingly vigilant in the matter of street car service. Should defects develop there is no appeal to a distant authority possessing no first hand knowledge of

the situation, and relief, if furnished at all, coming after exasperating delays. The remedy is right at hand and applied promptly.

The strap hanger ordinance was later supplemented by successive service ordinances on individual lines, and in 1913 an agreement was reached with the company by which it was to build $15\frac{1}{2}$ miles of new extensions during that and the following year. This program is now completed and every section of the city is well taken care of.

Thus an aggressive city council, directly responsible to the public and backed by public sentiment, was able to accomplish in short order a task which state commissions have failed to accomplish after long and thorough investigation and large expenditures of money; and at the expense of but \$125 a month, the salary of a single inspector. And withal no injustice was done the company. The 6 per cent dividends and large additions to surplus are still in evidence. With a franchise approaching its term limit, the opportunity will soon be at hand to secure substantial reductions in fares and a new contract embodying every up-to-date franchise essential. If the interests that have been demanding from the legislature state regulation of public utilities can be fought off successfully until that time, watch Minneapolis for a model street railway franchise!

Electric rates, not yet subject to local council regulation, have shown a steady downward tendency in the past few years, the result of vigorous pounding by the city council. The present maximum, 8.55 cents per kilowatt hour, still too high, compares favorably with cities where the service is furnished by a state regulated private monopoly. If the next legislature reaffirms the principle of the so-called "Nolan" bill of 1913 (killed by executive veto), giving Minneapolis authority to regulate electric rates, watch Minneapolis for rock bottom rates in this line!

It is pretty significant testimony to the effectiveness of the city's system of regulation of these utilities that their representatives spent much time at the legislative session of 1913 vigorously lobbying for the adoption of a bill creating a state public service commission. It was a case of anything to get away from the rigors of local regulation in the three cities of the state.

The price of gas in American cities has been steadily going downward for some years. But where do we find the lowest price? Not in the cities under state regulation, but in those cities that have fought out their gas problems unaided.

Indianapolis is the most notable instance. The maximum price in this city is 55 cents per thousand feet, the lowest maximum in any city in the United States, and a price fairly comparable with that in many of the European cities. This price was secured through contract agreement between the city and the Citizens' Gas Company, which entered the field a few years ago in competition with the old company, then charging 90 cents per thousand feet. The new concern made a price of 60 cents. The old company met this rate. Recently the Citizens' Gas Company has taken over its rival and competition no longer exists. As a sop to public opinion, naturally a little nervous over mergers of public utility rivals, the rate was reduced to 55 cents. Still lower rates are granted to large consumers. The only part the state public service commission appears to have taken in the matter was to give its official consent to the merger, although some of its enthusiastic friends insist that the 5 cent reduction should be credited to it.

I hesitate to defend the principle of competition in a public utility product as between privately owned utilities. But the Indianapolis situation emphasizes a phase of the subject that is worth consideration. As against the waste due to duplication of equipment, count the saving to consumers of gas in that city through the results of competition—30 cents per thousand feet for a series of years. The aggregate would probably far exceed the duplication waste. Will anyone contend that this price, or anything approximating it, would have been obtained by means of state regulation?

In the electric field the larger achievements in the matter of low rates have distinctly come through the initiative and civic energy of the "free" cities. Seattle, Washington, is a conspicuous instance.

In 1901 Seattle was in the grip of a private electric monopoly, charging 20 cents maximum for its service. The next year a city plant was projected. The price promptly dropped to 12 cents. When the municipal plant began operations, in 1905, the private plant made a further reduction to 10 cents. The city plant has made rates successively of 8 cents, 7 cents, and finally 6 cents maximum. The rate schedule is now 6 cents to 4 cents for residence lighting; 5 cents to $3\frac{1}{2}$ cents for commercial lighting; 4 cents to $\frac{1}{2}$ cent for power and 3 cents for cooking. The private concern has met the rate made by its competitor each time and the whole city has the benefit of these remarkably low rates. The city has a wonderful

water power plant, capable of large additions to power and with a distribution system serving the most remote suburbs. Its customers number 35,000. Its employees enjoy an eight-hour day, a six-days' working week and a living wage. Note again the community solicitude for the well being of the workers who furnish the service. Apparently the plant is managed in a thoroughly business-like way, providing out of earnings for the expense of maintenance and liberal sums for depreciation. The saving to consumers of electricity through the operation of the municipal plant has been enormous, estimated at not less than \$3,000,000 during the operating life of the plant.

The state commission in Washington has no power to interfere with municipal plants. But it is promised that attempts will be made to amend the public utility law to give the commission this power at the next session of the legislature. If this is accomplished it will be interesting to note its attitude toward the Seattle electric rate situation. Will the commission so "even up" things between the competing concerns as to perpetuate the private utility and maintain the present division of the Seattle electric field?

Winnipeg furnishes more testimony of what a city can do for itself when aroused to the necessity. The fact that this city is over the line in Manitoba does not detract from the value of the object lesson.

Winnipeg consumers of electric energy enjoy the lowest rates on the continent, a situation due solely to the fine enterprise and courage of its citizenship. The maximum rate for domestic lighting is but 3 cents. Power rates range from 3 cents to .72 of a cent, with further concessions for long time contracts and a special heating price of .9 of a cent. The original price, when the private company had sole possession of the field, was 20 cents maximum. This was reduced to 10 cents upon the completion of the municipal plant, and the private company has since met every reduction made by the city. The plant officials claim a saving for consumers of not less than \$600,000 a year during the time the plant has been in operation.

Enterprising community initiative has just won a notable victory in Kansas City, Kansas. This city, weary of making fat profits for the electric monopoly serving both cities on the river Kaw, built a municipal plant a few years ago. It established a rate of 6 cents to 3 cents for lighting and 3 cents to 1½ cents for power.

So successfully has the project been managed and so popular has it been with the consumers, that it will soon have the field exclusively to itself. The private company, which has been meeting the city rate, has recently announced that it will go out of business in that city early next year and serve only the big city across the river in Missouri where it is better appreciated.

No braver fight against heavy odds has been waged in the electric field than that of the city of Pasadena. Spurred to activity by the exploiting methods of the local monopoly, the city in 1908 erected a municipal plant. Electric consumers had been paying up to that time 15 cents maximum. The rate was reduced to 12½ cents as the agitation for a municipal plant grew in volume. The city plant began business with a rate of 8 cents maximum, which the private company promptly met. The city reduced its price in 1910 to 5 cents maximum with a secondary rate of 3 cents, a power schedule of 4 cents to less than 1 cent and still lower rates for off-the-peak load service. The estimated saving to the city has been \$100,000 a year during the life of the plant.

With the object of putting the municipal plant out of business, the private company, in 1913, reduced its maximum rate to 4 cents, probably less than cost. This company serves Los Angeles and surrounding points at rates ranging from 6½ cents to 10 cents maximum. The profits of operation in these places were being used to meet the deficits of operation in Pasadena, to the purpose of eventual subjection of the people of that city.

The last California legislature came to the rescue of the city by adopting an act prohibiting this special kind of unfair competition with municipal plants.

Working out its salvation by the municipal ownership route, Duluth, Minnesota, furnishes quite a remarkable example of determined civic purpose in the public utility field.

Heavily burdened with the excessive cost of creating a city on a steep rock bottom hillside, Duluth yet had the courage to take over the private water and gas plant for municipal operation when the company failed to meet its public obligations. The results of municipal ownership in this city have been two-fold—a disturbing factor was eliminated from local politics and the price of both water and gas substantially reduced—fully 50 per cent—and the quality of the service vastly improved. For eight years Duluth consumers

of gas have had a rate of 75 cents, a remarkably low price when the cost of distribution in that city is considered. Across the bay in Superior, Wisconsin, under the protection of state regulation, gas users for five years of that period paid to a private company \$1.40 per thousand feet.

Strengthened in its confidence to do things by the experience of its utility management, the Duluth public now purposes to take over the electric service for community operation, thus removing another troublesome political agency in the life of that city.

Detroit's long struggle with its street railway monopoly is too well known in the group before me to need reviewing in detail here. The lesson, however, fits in well with the subject and occasion. Out of that struggle Detroit has gained community solidarity and a keen civic consciousness. The city is well on its way to realize its long dream of municipal ownership of its street railway system, with rates and service based on the cost of the one and the public needs of the other, and profit and political interference and all the sordid accompaniments of private management eliminated.

During the progress of the struggle in Detroit, street railway rates were among the then lowest in the United States—eight tickets for 25 cents during the rush hour periods. The present arrangement of 7 tickets for 25 cents, good at all hours of the day, with universal transfers, equals the lowest rate yet secured through means of state regulation—that in Milwaukee. There is this significant difference, however: in Detroit the rate is an actuality, while in Milwaukee it waits on favorable action by the United States supreme court.

Detroit has also driven an excellent bargain with its gas utility. The price of 75 cents maximum, stepping down to 35 cents for the class of largest consumers, undoubtedly constitutes the lowest average price in the United States, next to Indianapolis.

Toledo has gone through a somewhat similar experience with its street railway company. Not yet so strongly committed to municipal ownership, nor so near its realization as Detroit, Toledo, out of its travails, has achieved conspicuous results in the matter of rates—a present working agreement of 3 cent fares at the rush hours and six tickets for 25 cents at other times, with universal transfers. But the largest gain to the Toledo public that has come out of this struggle is not in low fares, but rather in the development of a spirit

of community coöperation and sacrifice and a common growth toward the ideal of public management of the city's transportation and lighting functions.

No recital of the accomplishments of cities by their own unaided efforts would be complete without reference to Cleveland. Battling along for many years against heavy odds, but under inspired leadership, Cleveland has come through its struggles triumphantly. The 3 cent street railway fare, so long the vision of Tom Johnson, is realized. True, for the time being, beginning with September 1, the users of the transfer privilege must pay an extra cent to meet the cost of writing off some obsolete power equipment which perhaps might more justly have been charged to capital account. But the feasibility of the 3 cent fare, with reasonably adequate service, seems to be an established fact. Probably we are not yet ready to make general application of the 3 cent principle under the present liberal court attitude toward plant valuations and in view of the varying local transportation conditions. But Cleveland's example will be a great practical aid to other communities striving to create fair street railway conditions. The Cleveland lesson of public control of street railway finances and operations is of great value in this connection.

Cleveland now is leading another great public utility crusade—to prove to the urban world that a 3 cent maximum rate for electric energy is a practical proposition. A great modern electric plant, taking the place of the small suburban station that has for some years been furnishing electrical energy under city auspices, is now completed and ready to sell its product to all consumers at the maximum price of 3 cents per kilowatt hour. Already the powerful private concern has reduced its rates materially under the stimulus of real coming competition; in some cases equal to 50 per cent. The possibilities in this situation in the way of industrial expansion are enormous. Its effect in creating confidence in the community in its capacity to manage its own affairs and in making new standards of civic efficiency will be even greater.

Columbus, Ohio, without any of the spectacular accompaniments, court experiences and limelight publicity that have attended street railway struggles in Toledo, Cleveland and Detroit, has yet in its own way secured very substantial results in the way of rates.

Under the terms of the contract ordinance of 1901, the company, starting with a rate of seven tickets for 25 cents, has reached the

contract maximum of eight tickets for 25 cents, with universal transfers in each case. This result came through agreement between the city and the company. There were no long drawn out investigations by experts at heavy expense and no tedious court delays to wear out the patience of the people and postpone the actuality. And there is no reliable evidence yet produced that this settlement has done injustice to the company's interests.

There is no more heroic example today of a city plundered and its civic life debauched by its public utilities that is battling its way to freedom by its own efforts than San Francisco.

The city's privately owned street railway company, so long a disturbing factor in local government, failed pathetically to meet public necessities in the matter of adequate transportation facilities. The success of the exposition of 1915 was seriously jeopardized by this situation. In this emergency the city proceeded to construct a municipal line giving the city access to the exposition grounds. This line is being made the nucleus of an extensive municipal system by the construction of lines on streets on which the company's franchises have expired. Several of these are now in operation. The municipal system has been built at a cost per mile of less than one-half the capitalization of the private company's system. The probable ultimate result will be the acquisition by the city of the whole city transportation system, with operation direct by the municipality.

San Francisco is meeting its water problem with equal vigor, being about to take over the private company's plant and to develop an additional supply. Either proposition alone is sufficient to test the courage and the resources of any municipality.

I stated at the start that competition in some form was the means through which low rates and improved service in public utility products had been secured in the cities where low rates and good service are the most conspicuous. I do not desire to go on record at this time as defending the competitive system as the correct economic principle. Unquestionably, however, it has been very useful as the best available weapon of defense for distressed communities in their warfare with their public utilities. If state regulation is to displace it as the protector of the public interests, it must make a better showing in promptness of action and in material results than it has up to this time.

I also would make a clear cut distinction between competition between privately owned utilities and competition in which the municipality is a party. The statute handicaps placed upon a city to prevent recourse to municipal ownership are invariably heavy and the courts are available to add the element of uncertainty and tedious delay. It is, at best, a heart breaking job, with all the forces of entrenched privilege and conservatism in opposition. The provocation must be indeed great to induce a city to undertake the task. The existing private utility must obviously be flagrantly failing to meet its duty to the community. In such a situation, I believe the city to be fully justified in its course. I believe, too, that the offending utility, unaided by any official tribunal, should take its survival chances. It has no just right to demand or expect anything else. And the law that creates a state regulating commission and instructs it to interfere in such a situation to save profits for a private company or to guarantee the integrity of its investment, is not a just law nor one that serves public interests.

A CONSTRUCTIVE POLICY FOR PUBLIC SERVICE CORPORATIONS

BY CHARLES DAY,

Of Day & Zimmermann, Philadelphia.

I am glad to have this opportunity to call your attention to the significant trend of public service activities as it appears to some of us who are engaged in the management of public utilities.

The constructive policy which I will outline is predicated upon the existence of *governmental regulation*. This premise must be accepted with that enthusiasm which springs from a genuine conviction that the principle of regulation is not only inherently sound but that results secured have demonstrated its practicability. Its aim, therefore, must be to meet the fundamental obligations imposed by all regulation, namely: the attainment of maximum operating efficiency and the division of the resulting benefits with the public in accordance with a prescribed plan.

Legislative enactments of many states have provided for this by requiring that charges shall be based upon actual cost plus a reasonable margin of profit. Consequently, we have entered upon a new era which has removed the utilities from the zone of private enterprise governed by competition to that of public business subject to regulation and involving the right of the public to an intimate knowledge of every detail of the corporations' activities.

As a matter of fact, there is little opposition to the principle of regulation; it is the actual results of legislative enactments and commission activities that most frequently occasion dissatisfaction and open protest. Many laws governing public service commissions are faulty and illogical; many commissioners lack the proper qualifications; many decisions have been but illogical compromises. Therefore, the public service corporations quite naturally have felt that their most vital interests were jeopardized. However, the soundness of the principle of regulation must not be questioned on account of the existence of faults in its application, although, of course, we will lose the benefits which it should afford if a constructive policy is not established which will eliminate these serious defects.

While there has been a tendency to look to the public for a remedy, through the correction of faulty laws, and to the commissioners, through a modification of their points of view, *we believe that the responsibility rests squarely upon the corporations themselves. They alone can furnish those facts and statistics without which all argument is futile.*

Such vexing problems as arise in connection with regulation and competition; municipally versus privately operated utilities; what constitutes equitable rates and standards of service, etc., must ultimately be removed from the field of individual opinion and debate to that in which scientific analysis and economic laws will govern. Therefore, the policy which I will outline is not concerned in the first instance with the problems themselves but rather with the establishment of those fundamental conditions which in time should create unanimity of opinion as to the proper procedure.

Fortunately, much of the admirable work which has already been done, particularly in connection with the design and utilization of equipment, exemplifies the effectiveness of certain principles upon which this constructive policy must be predicated. It is with these principles, therefore, that we are concerned primarily. We know of no better illustration of their application than the splendid economies which have been effected in the generation of electric current. The development of the modern steam turbine and electric generator has resulted primarily from a most exhaustive and painstaking study and scientific analysis of all of the technical factors involved. The mechanical, electrical and thermo-dynamic problems have received the concentrated attention of hundreds of our most competent engineers, all striving to gain greater efficiency through a more perfect embodiment of fundamental laws in the machinery of their design. Of course, if the collective data of the past had not been carefully classified and recorded and basic laws derived therefrom, there would have been no definite point of departure for still greater refinement in theory and more perfect embodiment of these laws in practice. In that event the step from the reciprocating engine to the steam turbine would still remain to be taken.

What principle, then, has all this collective work fulfilled? Briefly stated, it is the principle of scientific analysis and deduction. The ruling motive has been, on the one hand, to interpret precisely the basic scientific laws involved and, on the other, the embodiment

in the needed equipment or apparatus of features which lend themselves to the most perfect functioning of these laws to the ends desired. It must be clear that every subsequent material benefit will result only through the acquisition of more precise and voluminous data, the discovery of new laws or the refinement of existing ones, or the more complete embodiment of these laws in the facilities produced. There is no room for mere opinion with regard to these matters.

Today no layman would presume to dispute the basic principles which have governed in the design of modern power plant equipment; and yet, well within the life-time of many of our foremost engineers, the technical questions to which we refer were not only settled empirically, but were often considered to be suitable subjects for individual opinion and debate.

However, the installation of efficient equipment does not insure the economical and continuous generation of electric current. Passing from the field of the technical engineer to that of the engineer-manager, we find that his contributions are only second in importance to those of the designer. These men must harvest the full benefits of which the modern steam power plant is capable. Upon first thought this may appear to be a relatively simple matter and, in fact, it was so considered in the earlier days of public service operation. Now, however, power plant employees are selected with painstaking care, every factor bearing upon their mental and physical fitness for the task being taken into consideration. Nor does the work stop when the selection has been made. The men are constantly trained in the use of the equipment, often with as much care as is expended in the training of athletes, and their retention depends entirely upon their ability to develop progressively under such a régime. Here, then, we find the principle relating to the scientific selection and progressive development of employees, a principle which has been recognized and conscientiously fulfilled for many years in certain departments of public service work.

The next step fulfills the third principle, which imposes the duty of providing ways and means of bringing together the trained power plant employees and the methods embodying the scientific laws in accordance with which the plant must be operated. This has required, among other things, the preparation of complete instructions to serve in all contingencies as a guide to the employees. In certain

plants additional compensation is paid in the form of higher wages or a bonus when the men, through the complete exercise of their skill and dexterity, fulfill the conditions as laid down.

Maximum power plant efficiency, however, is not assured through superlative service upon the part of the power plant operatives alone. Many conditions must be taken into account which originate outside the station, in connection possibly with a vast network of transmission lines, sub-stations, distribution systems and the individual installations of customers. This brings us to the fourth, last and most important principle which has contributed to the splendid efficiency attained in connection with the generation and distribution of electric current. It dictates that the burden of power plant operation rests, in the final analysis, upon the management not upon the power plant employees. We find the management taking the initiative with regard to the continuous despatching of load, issuing instructions relative to the harmonious and efficient operation of various power plants in combination and giving directions during times of stress and breakdown.

The direct results which have followed the conscientious application of the four principles in question have been:

First—Operating costs (excluding interest and depreciation) of many of our large stations have been brought down to five mills or less per kilowatt hour, depending upon local conditions, cost of fuel, etc.

Second—A degree of continuity of service has been attained in connection with properties serving large geographical territories which no one would have cared to predict a few years ago.

Third—The subject of power generation and distribution has been taken bodily out of the field of individual opinion and debate, as it is now recognized as being governed by well defined laws concerning which the expert alone has a right to an opinion.

It is not only in the field of power plant operation that these principles have been applied with the utmost success. One large public service corporation in the Northwest has already accomplished such notable economies in the cost of constructing transmission lines that they would be doubted were not records available which afford irrefutable proof. All conditions were subjected to painstaking scientific analysis; the workmen were selected with regard to their fitness for the task; definite instructions were drawn up as a basis for their activities; bonuses were paid when definite tasks were

fulfilled, and entire responsibility for the work in its most minute details was assumed by the management. Other illustrations could be cited readily but the foregoing examples will serve our present purpose.

The new policy to which we refer obligates public service corporations to apply these principles to every conceivable branch of internal activity. Maximum efficiency and economy are bound to accrue through the application of these principles to: major construction work, such as new extensions; routine construction work, such as connecting customers; maintenance work in all of its various ramifications; all operating functions, such as power generation, systematic patrol of transmission and distribution lines, periodical inspection and testing of all equipment; and all general business and administrative functions arising in this connection.

While the actual methods of applying such principles to these functions are in a sense secondary in importance, nevertheless they must provide:

For the absolute control of materials and labor through proper store-keeping and time-keeping systems;

The adoption of a comprehensive classification of income and expense;

A planning department through which all activities are directed; and

A cost-keeping system whereby a minute analysis will automatically and continuously check up the results of actual operation and afford a basis for further refinements.

As already stated, however, our policy not only makes high internal efficiency imperative but it also requires that convincing proofs of such results should be available to the public service commissions. It must be apparent that when these principles have been applied to every internal activity there should be no difficulty in fulfilling this requirement. Public service commissions will be in a particularly fortunate position in this regard as the accumulation of fundamental records or statistics relating to the operation of many corporations will form a sound basis for the establishment of standards which must command respect.

Now let us consider these well tried principles in connection with the equally important factors arising through our new obligations to the public resulting from governmental regulation. We have dealt with the *generation* of electric current; let us now consider the

sale of current, confining ourselves to light and power properties for the purpose of illustration.

Before the advent of regulation, competition influenced rates to such an extent that in many cases they did not represent actual cost plus what might be considered to be a reasonable profit. It must not be inferred from this that such rates were necessarily too high; in fact, rates were frequently forced down to a losing basis with the consequent disastrous effects. The establishment of regulation in many states is so recent that the corporations have not yet been able to adopt new rate schedules based on costs. Of course, there has always been an effort made to do this in so far as competitive conditions would permit, with the idea that reasonable rates would stimulate the use of electric current. Recognizing that the cost of service does not increase in direct proportion to the amount of current consumed, public service managers attempted to meet these conditions through the adoption of a sliding scale providing for a reduction in rate as the consumption increases. Rates of this kind, however, while pointing in the right direction, only approximate an equitable charge under the new order of things. They were not based upon a definite knowledge of the characteristics of operating costs which can be revealed only by an exhaustive analysis of daily and monthly records.

Rapid strides have been made recently toward the solution of this pressing need, particularly in those states where regulation has been established for some time. The work of the Wisconsin commission has been notable in this regard; Mr. Erickson's contributions especially having paved the way for a system of rate making that promises to meet almost every requirement. Such work is very significant in the present connection for it exemplifies admirably the convincing and satisfactory character of results which accrue when the foregoing principles are applied to those *external* relations, around which so much controversy now centers. In this connection a thorough and exhaustive knowledge of costs and operating conditions is imperative. However, the acquisition of suitable and adequate cost records and a knowledge of their inter-relations and individual characteristics for a given property is an enormous task, frequently necessitating the introduction of entirely new managerial methods. Nevertheless, the benefits secured justify in many ways the time and money expended. In so far as rates for service are concerned, such work shows:

That a considerable part of operating cost or expenses *remains stationary* for long periods, even though the use of current increases at a rapid rate;

That another part increases when more customers are added to the system but is also independent of current consumption;

That it is only the remaining charges that accumulate in *direct proportion to the actual kilowatt hours sold*;

That taxes, interest and depreciation increase in proportion to the value of the property needed to serve the customers in question. Therefore, it is quite possible that any class of customers may increase their current consumption two or three fold and yet their just proportion of these charges would remain stationary.

I have referred but to the broad and universal characteristics of operating expenses incurred by light and power properties. If we bear in mind that many such companies serve a number of communities and that each community may readily comprise ten or more classes of customers and that the inter-relations of costs, instead of being characterized by the simplicity of our illustration, are complex to a degree; then the task which is imposed by the establishment of equitable rates will be more fully appreciated. Therefore, we should not be surprised when we find that individual opinion and debate merely lead to a greater diversity of opinion and more heated controversy.

Is it not apparent that rates arrived at in the way suggested will be satisfactory to everyone concerned? Let me show you the fallacy of the straight kilowatt hour rate when subjected to this kind of analysis. Such a charge provides an equitable return only in the case of one specific rate of consumption. If the consumption is greater, the charge is too high; if less, the charge is too low. This results directly from the fact that in all cases a part of the bill rendered for service should be treated as a fixed amount to cover expenses which do not increase with a considerable increase in the use of current. This is particularly true in the case of residential customers. If, for example, \$1.20 per month proved to be a proper price to charge for the use of 10 kilowatt hours, then the equivalent straight rate would be 12 cents per kilowatt hour. However, an analysis of the expenses incurred in this case might show that 90 cents of this amount represents the return which should be secured in connection with stationary costs (such as bookkeeping, reading meters, rendering bills, fixed charges on certain equipment, etc.). With this fact before us, a fixed charge of 90 cents and a kilowatt hour

charge of 3 cents, yielding the same total of \$1.20, would appear to be equitable. Such a rate, however, would permit this customer to triple his consumption without increasing the stationary expenses, with the result that his bill would be but \$1.80 instead of the \$3.60 which would result from the 12-cent rate. In practice the straight kilowatt hour charge, particularly when applied to residential customers, has been made high enough to assure a satisfactory return, even when the use of current is restricted to the minimum amount consistent with the daily needs of the average customer. It follows, therefore, that the customer whose consumption exceeds this minimum pays more than his share of the stationary expenses. The inevitable result of this is that a majority of customers cannot afford to use current for many of the purposes to which it is now adapted and the corporations lose the many benefits which should follow an increased use.

Summing up, then, the benefits which we should confidently anticipate as a result of this method of rate setting, we have the following:

First—Such rates will just yield a return equal to the cost and fixed charges incurred plus a fair margin of profit; consequently, total gross income will be equitably apportioned among the respective classes of customers.

Second—Customers will secure the maximum benefits which should result from time to time from the introduction of more modern equipment and more efficient managerial methods.

Third—Public service corporations and their customers will mutually profit through the increased sale of current which is certain to follow; for greater output means lower unit costs.

Fourth—The clarification of the rate question will assist materially in the solution of many other trying issues. For example, the large economies in the cost of power effected through serving a wide territory from one central station will be appreciated by everyone and such procedure endorsed when the resulting advantage is fully reflected in the rates.

Fifth—The subject of rates will eventually pass from the jurisdiction of individual opinion and debate to that of unvarying scientific laws.

Commissioners are confronted by many other important questions which can be properly settled only by the application of the same principles. Most of the laws which they administer give sweeping powers as a means towards thorough regulation. Many of the people who are not familiar with the intricacies of public service business have inferred that within a relatively short time

the respective commissions would have the various utilities in their jurisdictions under adequate control. Where the monopolistic principle has been incorporated in the law, the public at large has expected that actual results would, in a short time, convince even the layman of the wisdom of having accorded such sweeping rights. On this account many commissions have had to face open criticism or an undercurrent of disapproval for, in but few instances, have the results of their activities been reassuring in this broad and immediate sense. It must be apparent that the commissioners have not been responsible for this condition. It has arisen primarily through the inability of the corporations to produce adequate and reliable records, which must be available before existing laws can be enforced equitably.

I hope that the foregoing illustrations and comments, notwithstanding their inadequacy, will win your support for the constructive policy for public service corporations, the elements of which are summed up as follows:

This policy is predicated upon the following premises:

1. The recognition of governmental regulation as a necessary condition to the maintenance of satisfactory relations between the public service corporations and the public.
2. The acceptance by the public service corporations of the responsibility for the necessary constructive policy.

The elements of the policy are:

First—Public service corporations shall enlighten the commissions concerning every conceivable phase of their activities.

Second—Actual results of operation must be depended upon as the only true basis upon which the many questions at issue can be properly solved.

Third—The corporations must be allowed to participate with the public in the economies for which they are directly responsible, thus affording the necessary incentive for continually increasing efficiency and for more effective coöperation between the utilities and the public.

Fourth—Every conceivable activity relating to public service work shall be handled in accordance with the dictates of the following principles:

The first of these principles relates to the acquisition, tabulation and classification of all existing knowledge pertaining to every phase of the business and the perpetuation of such records.

The second principle relates to the scientific selection and careful training in standard methods of all of the employees engaged upon the property and to their progressive development.

The third principle relates to the necessity of bringing together by suitable means the results of the scientific analysis of existing data and the properly selected and trained operatives.

The fourth principle, and in a sense the most important, relates to a new conception of the division of work between the so-called management or administrative force and the operatives or workmen. It requires that the burden of management, not in the accepted sense, but with regard to the smallest details, shall fall upon the managers; those who are alone in a position to assume this responsibility intelligently.

Is it not clear that this is the type of management that must form the basis of any truly constructive policy? Unfortunately, these principles have been applied to but few public service activities. However, if the accuracy of our predictions is doubted, we have only to turn to the industrial world, where the basic soundness of these principles and the resulting methods has been demonstrated beyond possibility of contradiction; for these are the principles which Fred W. Taylor advocated many years ago and upon which all of his now classic work in the field of management has been founded.

While we public service managers have in the past unconsciously fulfilled these principles in isolated cases and without realization of their fundamental character or universality of application, Mr. Taylor has founded upon them a new philosophy of management which has already wrought revolutionary changes in entire groups of industrial activity.

Internal efficiency has been enormously increased but possibly the solution of the labor problem in plants operating under scientific management is Mr. Taylor's greatest contribution. In the public service field, scientific management will bring about equally high internal efficiency and, further, through its extension to all external relations with the public and commissions, it will prove to be the most potent single instrumentality in accomplishing those results which are the primary purpose of every regulative enactment.

Please do not leave this subject with the impression that the constructive policy which we offer could have been or can now be put into effect by the mere issuing of orders. We must recognize existing conditions, together with the great divergence of sincerely held opinions, as a part and parcel of the material with which a truly constructive program must deal. Such a program, if sound, will compel the ultimate acceptance of that which is right and the abandonment of that which is faulty. While this process will, of

necessity, be slow and while many of us believe that we can see short cuts to a prompt and equitable solution of the entire subject, nevertheless, in the long run it will prove to be the only route that is marked by permanent success.

The new era will come through a gradual evolution, building upon and encompassing the heritage which has resulted from one of the most notable developments during recent years. Further, the work will never be finished so long as the sciences involved and the art of management continue to progress.

WHAT REGULATION MUST ACCOMPLISH IF IT IS TO BE PERMANENT

BY JOHN M. ESHLEMAN,

President of the Railroad Commission of California.

I do not pretend to be wise enough to answer the question which I have here propounded as the subject for this discussion, for in order to do this it would be necessary for me to be able to forecast the future and know in advance what economic and governmental changes are yet to take place. While the principles of justice are immutable, yet the conditions to which these principles apply are always changing. For this reason the methods that must be applied to the solution of our governmental problems vary as conditions of society change. We may, however, quite properly discuss fundamental propositions and of necessity deal with them in the light of the present and proceed upon the assumption that the present aspect of our problems will have a tendency to continue.

Regulation is not a new thing. It is well, however, to have in mind the fact that regulation, as we are here understanding the term, is only one aspect of a broader conception. Regulation in this broader conception is as old as civilization itself and its justification is found in the maxim which I roughly translate, "So use thine own as not to injure another's." All private property is held subject to this well known and justly accepted rule. If a man lived alone upon some Robinson Crusoe isle there would be no need for regulation of any sort, but as soon as we have two we have relationship, and relationship which must be controlled by some convention. Thus all law arises from the necessity of regulating relationships. Neither personal liberty nor the right to private property requires nor will permit to the individual absolutely unrestrained action. In democracy we urge the utmost individual liberty consistent with the rights of other individuals in society, but beyond this we may not go, and it is elemental that always we must use our individual liberty and our private property so as not to do injury to others who have rights as we do, and this rule is a part of our title to our property and our right to our liberty. While it is

easy to state and agree with this general rule, yet the economic problems of all times have arisen from the differences on the question as to what limitation should be put upon individual liberty and the use of private property in order to accomplish the desired result. The fact that the one in possession of liberty and holding property has usually had the larger say in determining when his use of these possessions of his worked injury to others has further complicated the problem.

Regulation in its broader significance is the restraint which society, as an institution, places upon individuals. Regulation, as we generally accept the term, however, represents a more intimate hold by the state upon a property, or a business, or a person than the one we have here generally referred to. Even the more intimate interference—if you desire to use that term—in private affairs which we now know as regulation is nothing new. In Rome the grain trade was regulated and regulated rigidly even as to price before the dawn of the Christian era. In the Middle Ages the butcher and the baker had their greed held in check by the arm of the law, and innkeepers and common carriers were regulated from the beginning of Anglo-Saxon civilization. And the need for these specific forms of regulation was no different in kind than the need for the general regulation which justifies all law and which arises from one of the fundamental traits of human nature. There is implanted in each of us an acquisitive and selfish spirit which makes us, one and all, prefer our own advantage, and when the time comes that we must make a decision between our neighbor's advantage and our own, ordinarily we do not consciously take the worse of it. When in any individual case a man must make the decision as to whether or not he is using his own property or indulging his personal liberty in a way not to injure his neighbor, if he is given a free hand and any one is injured it will be the neighbor. Therefore, it follows that in every case where we are in a position, in the absence of restraint, to force our neighbor to accept our decision in a case involving his and our own rights, outside restraint must be imposed else injustice will result.

I have presented these fundamental propositions to you because they have a large bearing upon our problem. In every case of monopoly or other condition of unequal dealing, the state has the right to prevent those in control, through the exercise of their natu-

ral human traits from taking advantage of those with whom they deal, and this is at bottom the justification for the regulation of utilities. A public utility is essentially monopolistic in its nature. It deals directly with the individual. Alone the individual is powerless. Elemental justice requires that the state provide a method to protect the individual. Utility corporations composed of and directed by men will seek their own advantages. Without restraint, by reason of its power, the utility always becomes the jury and the judge as between itself and its patrons, as do all monopolies dealing with human necessities. In acting thus the utility has usurped a sovereign right, and because the people of the municipality or the state involved will not long remain willing to forego the exercise of sovereignty, regulation of utilities grew up merely as a means of enforcing equality of dealing between the monopoly and the monopoly's patrons. The fact that this method was adopted does not preclude the possibility of there being other methods of accomplishing the same end, available to government. It might seem, therefore, that we could at this point give our answer to the question here considered by saying that regulation to remain permanent must be able to enforce equality between the utility regulated and the utility's patrons, but a little analysis will show that this is only another way of stating the question and not its answer.

In the more primitive states of society competition usually rendered regulation of prices and conditions, upon which men having something to sell would dispose of it, unnecessary, but as society becomes more complex uniformly the tendency is to center the control of the necessities in fewer hands. Monopoly of some form is usually attendant upon increasing wealth. For our discussion here we need, however, deal only with the natural monopoly which is the subject of the regulation that we are considering. While it is not proper in defining a term merely to refer to an example, yet the distinction between a natural monopoly and other forms of monopoly is not sufficiently marked to warrant a hard and fast definition. Railroads, water systems, lighting companies, telephone companies and the like are examples of natural monopolies and they have in common the characteristic which causes us to decide that they should be regulated in their activity and permitted to remain monopolies rather than eliminated and destroyed as monopolies. They are of such character that competition cannot bring about the results that

may be brought about by forceful and intelligent regulation, because competition necessarily means duplication and the devotion of a greater amount of property to the business in question and the expenditure of a greater amount of money to conduct such business than is necessary under monopoly. Two lines of street railway on the same street cost more to construct and more to operate, but they do not cause more people to live on such street from whom shall be drawn a revenue. However, the fact that the two lines of street railway upon the same street usually result in better service and lower fares, leads to the belief, on the part of those who do not carefully analyze, that the competition has been the cause of such better service and lower rates. Of course this is not true. While for the time being competition between natural monopolies ordinarily gives better service at cheaper rates, yet it is mathematically demonstrable that better service and cheaper rates could be afforded by either one of the competing agencies than by both. The trouble in the past has been that the monopoly in control of a field of operation has not been required by those in authority to do its best, and monopolies, like individuals, do not do their best in a commercial enterprise unless it pays them to do so.

Under competition the tendency of those in control is to take the lowest possible earning upon which the property may be maintained and money secured for the enterprise. The tendency under monopoly is to take the largest possible earning that may be secured by extorting from the patrons all they can be forced to pay. Competition although economically wasteful inevitably produces better results than monopoly without regulation. In fact it very often produces better results than monopoly under some of the regulation that we have known. It may be then considered that in the case of a monopoly regulation would be justified if it only enforced competition and produced conditions that would invite the fullest competition. Such a result would justify the regulation which only sought to destroy the monopoly. But in the case of a public utility, as I have already suggested, such a course would result in more expense than is necessary to get the work done. A further step along the line of regulation would be accomplished if the best service and lowest rates possible to be given by the utility in question were afforded while such utility still remained a monopoly. Necessarily rates cannot be forced lower under competition than will yield sufficient funds

to carry on the business and get the money necessary to be invested. Where the condition of competition produces more than this inevitably combination will result or the destruction of one of the enterprises, and thus the elimination of the monopoly, or the imposition of too high rates upon territory served by one of the competing forces, if there be such territory, in which there is no competition. In short, losses sustained by affording less than reasonable rates must either be recouped from consumers other than those affected by the competition or subsequently recouped from the very consumers who initially benefited by such competition. If in the recent past we had not seen a tendency to question the propriety of monopolies even in a public utility field, I would have assumed that you here would agree that regulation by public authority rather than by competition is better for the patron of a natural monopoly, but inasmuch as this has been questioned in some quarters I have deemed it proper to discuss it here thus briefly.

I lay down the fundamental proposition that in the case of a natural monopoly, such as I have here named, proper regulation may always produce better service at lower rates than can possibly be afforded under competition. Therefore, the first requirement that regulation must meet is that it produce better results than can be produced by competition else it goes down before competition and we must return to a condition of competition between utilities. That regulation can easily do this has been demonstrated in many quarters. That it does not do it in a great number of instances is also undoubted.

Whenever anyone has anything to sell such a one desires to sell it at the highest price obtainable. Whenever anyone is required to purchase something, such a one desires to purchase that thing for the smallest outlay possible. I take it this will be admitted without much argument. From the standpoint of the utility the highest price for the cheapest service is desirable. From the standpoint of the patron the lowest price for the best service is what is wished. For many years in the past, by reason of interference in government and the domination of officials supposed to stand between these large enterprises and their patrons by the enterprises themselves, public utility corporations, and large business concerns as well, have been enabled too nearly to approach the desirable from the seller's standpoint, namely, the highest price the buyer can be induced to pay. The anti-trust laws have done something to dis-

courage this tendency, but they have not done one tithe that aroused public sentiment has accomplished. The wise man seeking his own advantage sees to the future and is not entirely content with the present return, and the wise public utility owner seeing the trend of the times, largely produced by the sins of himself and his predecessors, has glimpsed public ownership in the future, and perhaps public ownership in competition with his privately owned industry. To be sure he has contended strongly against this as being unfair, inasmuch as the publicly owned concern pays no taxes, buys no franchises and if it has incurred losses such losses are made up from taxation upon its patrons as property owners, the larger percentage of which patrons always pay the smaller percentage of such losses. Such representative of private industry, looking to the future, has seen that he cannot permanently impose, as a condition upon which he renders his service, burdens that are disproportionate to the burdens that would be imposed by the public upon itself if such public should conduct such business itself. On the other hand the public must understand that as a purchaser of something which the private owner of the public utility has to sell, and which such public desires to purchase at the lowest possible outlay, the purchase price can never be less than the cost of doing the business, which cost will always be the actual cost of performing the public utility function represented by operating expenses and the like plus an amount sufficient to take care of the worn out capital devoted to the enterprise plus an amount sufficient permanently to induce capital to flow into the public utility industry in competition with investments in other industries. Under private ownership these requirements must always be complied with, else the public utility business will not be well done. The maximum service at the minimum cost is the desirable. The maximum service at the minimum cost will not be given either by monopoly or by competition unless the monopoly is regulated with such a degree of intelligence as to bring about such result. The tendency under competition, as already pointed out, is to produce the maximum efficiency at the minimum cost that can be afforded by the owner of the industry, but this minimum cost inevitably must be higher than the minimum cost at which the same service can be performed by the utility enterprise in possession of a field in which it does not have to divide its revenue with a rival. Regulation, therefore, must supply the inducement or the compul-

sion which is necessary to put the utility owner operating without competition in the same frame of mind in which we find him operating under active and bona fide competition. If this is done utility regulation will be permanent provided the private owner of public utility property in the frame of mind suggested *can* do as well as can be done under some other form of ownership. In short, the limit of the effect of regulation from the outside is the production of a condition which gives to the consumer the maximum of service at the minimum cost that can be afforded by the owner of the utility, and in this cost is always that payment for money to be invested in the utility which is necessitated by competition with unregulated industry.

It being determined that the maximum effect of the very best regulation is a condition wherein the utility is giving to its patrons all that it can afford to give and pay the necessary cost of the business, the next step in the inquiry naturally is to ascertain whether or not there are other methods that may be substituted for regulation which will give to the consumer a better rate for the same or superior service than the private owner can afford to give. Of course such substituted arrangement, even though it gives cheaper rates and better service, must also be free from evils which do not result from the present system of privately owned utilities. In other words, even though we discover some substitutional arrangement which gives better service and lower rates, yet if attendant upon such arrangement are disadvantages not inherent in the present arrangement which off-set the advantages of lower rates and better service, then the substituted arrangement is not desirable. In short, the permanence of any condition is always determined by making a comparison between such a condition and what might result under substituted conditions. What *is* must always be compared with what *may be*.

Having in mind the maximum of service at the minimum cost, it is proper to analyze the elements which go to make up the costs of conducting the privately owned public utility enterprise. It is apparent that our inclination up to this point is to decide that the desirable from the standpoint of the public begins with monopoly unregulated as the least desirable; next, free, unrestricted and bona fide competition; and last, monopoly with adequate regulation which places the private owner of public utility property in the frame of

mind to do the best possible for his consumers. I do not suggest that it is humanly possible to force from without a frame of mind upon an individual similar to that induced by the desire for gain or the fear of loss on the part of such individual. I doubt very much if—to use a common term—regulation can cause a private owner to “extend” himself as much as the fear of losses or the hope of gain under competition. Fear of the law has never been as potent, at least in commercial enterprises in America, as hope of reward. Therefore the private owner will always strive harder to please in order to defeat a rival than he will in order to please the government. But strive however hard he may he cannot do so well if his business is divided as he could do, if so minded, when his business is not divided. In order to survive as against competition, regulation must at least produce a condition a little better than can be afforded by the owner under competition, and as against a system of competition regulation will survive so long as it excels competition in this regard, even though it does not get from the utility owner all such owner can afford to give.

If it were possible to ally with the force of the government the desire of the private owner for gain, the two harnessed together would make a pretty strong team. In many of the states the recognition of the fact that duplication of property and cost of service, necessitated by competition between natural monopolies, is economically unsound has led public authority to lose sight of the fact that it might be possible to ally with itself the selfish inclination of the owner of private property. Thus in some states seldom if ever is a competitor allowed to go into a field already occupied by a public utility of like character. Under such condition it inevitably results that the utility operating exclusively in a field is reluctant to do anything except that which is forced upon it through governmental compulsion. There it holds its place secure in the feeling that any temporary advantage which may be secured will be retained to it and that it is time enough to be good when it is forced to be good. I conclude that the states taking this position do not properly understand their problem and the means at hand to solve it. The justification for monopoly in a public utility field is the advantage which such monopoly accords to its patrons, and it does not lie in the mouth of the representative of such monopoly to urge its protection on the part of the state or the municipality because of a benefit to

the public which it does not accord. It certainly is rather a nervy proceeding on the part of a utility manager to urge that it be protected in its field because such protection is good for its consumers when as a matter of fact the benefits of such protection are retained by such monopoly. It is hard to make the consumer who does not understand fine spun theories or economic fallacies understand that a condition should be tolerated on the ground that it is good for him when as a matter of fact it is not good for him.

It requires a tremendous amount of investigation with attendant use of governmental machinery and expenditure of governmental funds to determine just what a regulated monopoly can afford to do. I think in California we have discovered a method which although it may result in some duplication of public utility properties yet in the long run will save money to the consumers without any injustice to the utilities. In California where a certificate must be obtained from the railroad commission, which is also a public utilities commission, before certain designated utilities can enter a field not theretofore served by them, we have laid down the following rule: If the field is already served by an existing utility of like character the commission will determine whether or not the existing utility is doing its duty toward its consumers, by giving to them the best service at the lowest rate it can afford. If it is, its proposed competitor will not be allowed to come into the territory. If it is not, and the utility desiring to compete can establish the fact that it can give a better rate and more adequate service than is being given by the utility already occupying the field, it is allowed to go in and compete with all the resulting duplication of plant and economic fallacies, etc.

In the first important case involving the entry into a territory already served by a utility by a second utility of like character, the commission permitted the competitor to go in and announced the rule I have here recited. The lighting company already in possession of the field offered to accord, after the hearing, as low rates as its competitor offered to give and made an earnest plea that duplication should not be permitted when no good would result. The commission held that its plea came too late and that the necessary result of granting it the right to reform when a competitor knocked at the door of its territory would be to encourage other utilities and this utility in other territory in their failure to give adequate service

at reasonable rates until a competitor should appear; and likewise no competitor would attempt to go into the field served by another company because such competitor would understand that the net result of its efforts would be to cause the one occupying the field to be good. By this plan we harness together the power of the state and the desire of the private owner for gain. Immediately after this decision was announced and became understood, light rates within the state of California dropped 30 per cent in all non-competitive territory. It is my opinion that it would have cost the state of California more money to have investigated all of the light and power rates of the state and to have forced these companies to have accorded the rates which they voluntarily gave, than the duplication in the territory where we allowed competition to exist represented. Under this potential competition theory, as it has been named, regulation, in my opinion, most nearly produces the result I have suggested must be produced if regulation of monopolies is to be substituted for actual competition, for by it we have put the private owner of public utility property in the frame of mind where he fears competition that has not yet come upon him and seeks to forestall it by doing as well or better than he could afford to do if competition were forced upon him. Therefore, I conclude that regulation, as I here use the term, can remain permanent as against competition. And, of course, by that much the more does it advantage over unregulated monopoly.

But we must likewise look to the future in determining the permanency of the present plan. Privately owned utilities must be able to stand every comparison that is made with publicly owned utilities. Government can enter into the public utility business and has done so in many cases, and it will inevitably follow that government will continue going into public utility enterprises if those in charge of government are persuaded it is the best thing to do. And whenever public ownership shows an advantage which is not off-set by some attendant disadvantage, it will be hard to persuade those in control of government that it is not best for the public to own and operate public utilities. A loud cry goes up from the proponents of private ownership to the effect that public ownership has many disadvantages, such as the creation of an army of public employes, vast political machines, waste by reason of inefficiency under government, and the like, and comparisons are made

between the conditions, particularly as regards railroads, existing here and those existing in foreign countries under public ownership.

Of course, in this discussion I cannot analyze these comparisons, but it is well to have in mind in passing the fact that gifts have been made to many of the railroads in America sufficient to build these railroads. These gifts have been either direct by way of land grants, franchises and the like, or indirect through rates higher than the railroads could have afforded to give. As far as the comparative condition here and abroad is concerned, as I have said, we cannot take the time here to analyze it and deal with these contentions, but from a considerable study of this subject I am convinced that the private owner has not made his case on this point. As far as machine interference in politics is concerned, it would be hard to make anyone familiar with political conditions in America believe that anything worse could result from public ownership than has heretofore existed and does in many places now exist under private ownership. We all know that most of the corruption in city government is directly chargeable to interference of public utility corporations in the affairs of the municipality and likewise there are some states in which the suspicion at least has existed that large transportation companies have had something to do with state government. I believe any intelligent American audience would be willing to dismiss this on the theory that the honors are at least even.

Coming down now to a comparison between a public utility operated by private capital and one owned by the public we must here put the test already decided upon. First, regulation to withstand public ownership must bring about the condition of mind on the part of the private owner we have already discussed, but it also must go further and deal with conditions over which the private owner often has no control. The financing of public utilities in the past has directly resulted in a condition which makes it very hard for the operators of such properties to do what they should by their patrons. Because of the supposed risk it has been urged that larger payments should be made to secure capital. I wish we had time here to discuss this question, but I can only refer you to my views as set forth in an article published in *The Annals of the American Academy of Political and Social Science* in May, 1914, as justification for my conclusion that regulation to be adequate must regulate the securities of utilities. In the publicly owned utility, there will

be no stock and therefore no water. The investment will represent the value of the property and it will not be necessary to make five or six per cent on two or three times the value of the property to pay interest on bonds and dividends on stock, thus necessitating a net earning on the value of the property on this ratio of ten or twelve, or in many cases even a greater per cent. On this comparison the privately owned and operated utility, as now existing, is distinctly at a disadvantage. It need not be so, however, if proper methods are adopted. But only when the amount upon which an earning shall be made is not greater than the value of the property will it be possible for private ownership to compete with public ownership in this regard. Again, the funds of the privately owned enterprise must be honestly devoted to the purposes of the public utility. This is possible of accomplishment but has not been the rule up to the present day. It is unnecessary to call to your attention the disclosures in the New Haven road or the Frisco system or in the United Railroads in San Francisco under the manipulations of Mr. Patrick Calhoun. Ordinary thievery, however, is not the only vice encountered along this line. The practice of officials of utilities in having interests in other corporations, sometimes antagonistic to the property they control, is equally pernicious and must be eliminated if the comparison is to be favorable to private ownership. But perhaps more important than all is the necessity that the investment of private capital must be taken as the basis of earning and not the reproduction value new or even depreciated. To illustrate this I will call to your attention an actual case. Mr. E. P. Ripley of the Atchison, Topeka and Santa Fé Railway Company was on the stand before the California commission in the Wells Fargo Express case. Mr. Ripley was contending for a certain value for the Santa Fé property, which value, as is customary among utility owners, was urged to be par value of the stocks and bonds. The lands of the Santa Fé were listed at a certain amount. During his testimony Mr. Ripley took occasion, as is his wont, to rap public ownership. He was asked whether or not his company would sell to the government at the price named as the value. My recollection is that he said it would. He was next asked whether or not the terminals and other real estate owned by his company would increase in value, and he very vigorously answered in the affirmative. Then the suggestion was made to him that his testimony was not very

favorable to private ownership inasmuch as if the Santa Fé property were purchased today at its present value by the public the investment would become static and the unearned increment in lands and terminals would not of necessity in the future be a basis upon which rates must be earned. And this, in my opinion, is the most important question to be considered and is one of the cases wherein the private owner of public utility property must understand that if he insists on the tremendous increment in value of lands and terminals going always to the private owner inevitably public ownership will result. Why this increment may not justly and possibly legally be claimed by the utilities is too large a question to deal with here. But as a purely practical proposition, if the sum upon which an earning must be made keeps going up and up independent of the investment, some system will be adopted which will make the investment the measure of the sum upon which an earning shall be allowed even though a resort to public ownership be necessary. It is evident to me that regulation, had it begun in time, could have reached this difficulty, but a great part of it in all probability cannot now be touched. To illustrate: Power permits have been given away which are worth immense sums. The theory of these utilities, which will probably be sustained by the courts, is that earnings must be allowed on the value and not the cost. How easy it would have been in the beginning to have imposed a condition in the grant of these power sites, or even in the grant of lands in aid of railroads or bonuses in aid of utilities in cities, to the effect that the grant was only accepted on the condition that it should not be used as a basis for earning. These utilities in accepting the grant would have been bound thereby and they would not have been handicapped in any regard because their capitalization could have been readily kept in the proper relationship to the value of the property acquired by purchase and not to the value of the property given them. In effect, however, the American people have allowed the capitalization of their own generosity and are now required to pay an earning on such generosity, and the more generous they have been the more they have to pay. In the future this condition can be reached by regulation properly applied, but so much has been given away already in franchises as well as property that I am very pessimistic of the ability of regulation properly to deal with this difficulty. Certainly, however, to be permanent regulation for the future must provide a means whereby

the investment shall be the basis upon which an earning shall be allowed.

Some time ago in a decision by myself on the California commission, I pointed out the fact that utility enterprises are at the mercy of the state and that only equitable considerations would finally have weight in regulation. This raised a storm of protest on the part of certain utility representatives. I still am of the opinion that this is true, and I marvel at the short-sightedness of the private owners of public utility property who are now contending for every possible addition to value that the strictest legal considerations will allow and at the same time loudly clamoring for the consideration of equitable claims when such equitable claims are in favor of the private owner and not the public. The Interstate Commerce Commission is today starting upon the valuation of American railroads. Organizations representing these roads have been formed and are contending for every possible element of value that can be thought of. I have no doubt today if the same basis of valuation be put upon these roads, particularly upon their terminals and lands, as will be required under the reproduction cost theory that it will be found that these roads must be permitted to raise their rates in order to produce an earning thereon, and that if this valuation is taken as a basis for sale, if a sale be made to the government, a price will be required to be paid larger than the public should be called upon to pay. Already in many quarters it is being urged that federal lines of steamships be put into operation between the Atlantic and the Pacific Coast with the necessary result that freight rates between terminal points will be reduced. Likewise it is suggested that the government build a transcontinental line of railroad which would further reduce such rates to the end that the owners of these roads can be induced to surrender ownership at a fair value. There can be no question that, if the government decided to enter into competition with the existing roads, it can by such competition vastly reduce their earnings. Likewise in any city, if the municipality decides to operate its own utilities and does not desire to buy the existing utilities, it is not compelled by law to do so, and the net result is what amounts to a practical confiscation of some of the property of these private owners, which confiscation, however, can be lawfully brought about. I have in mind cases in my state where existing water companies in municipalities have been thoughtless

of the people's rights and in two cases that have come to my knowledge the municipalities have put in their own plant in competition with the existing plants, with the result that the private owners have been required to junk their systems. How short-sighted then, I say, are these owners of public utility property, in the face of the power of government to enter into public utility business, in contending for every element of value that may be enforced on the strictest legal grounds. If they are not satisfied to limit themselves to equitable considerations—which in my opinion will always be recognized by the public—they may expect small consideration at the hands of the public when the question of a competing municipal plant arises.

It is my belief, therefore, that regulation cannot remain permanent unless the utilities are willing to meet every comparison, and show that the balance is at least not against them in such comparison, with publicly owned and operated plants and that in doing so they must be limited to equitable demands else they will inevitably be called upon to compete with governmentally owned properties.

Even when doing its best and insisting only upon equitable demands it may still be that private ownership cannot stand up against the publicly owned utility. It certainly is true that unless the privately owned utility does its very best it must yield to public ownership, but when it has done its best then it must be inquired whether its best goes as far as the public can go. We have already referred to franchises and taxes, but of course the advantage of the publicly owned utility in this regard is more seeming than real in the final analysis. For the payment of these taxes exacted from the privately owned plant is merely remitted on the part of the one publicly owned. But there are two other considerations that are worthy of note. Money can always be secured on the public credit more cheaply than on private credit under present conditions. Such being the case the privately owned enterprise will always be at a disadvantage in this regard. Furthermore the reasonable profits over the cost of the borrowed money in a utility owned by the public go into the pockets of the consumers themselves. In these two respects public ownership will always be preferable to private ownership; and unless there are countervailing disadvantages the tendency will be toward a substitution of public ownership for private ownership even when the private owners are doing all they can be expected to do under governmental regulation.

It is therefore my opinion, first, that regulation can be made to be permanent as against a system of competition. Second, that it cannot be made permanent as against a system of public ownership unless the utilities while in private ownership do the very best they can afford to do and pay sufficient earnings upon their capital to induce the necessary investment. Third, that unless some method can be devised to secure investment in public utility enterprises in private ownership on the basis of a return comparable to the interest rate upon which a municipality or other governmental agency can borrow money, the tendency will be to substitute public ownership for private ownership under regulation.

Before I close I would like to impress upon you as forcefully as I can the fact which I think is appropriate for representatives of municipalities to have in mind, that municipalities have as a rule failed when we apply the proper test of regulation, and that they have failed for two reasons—first, because too often municipal authority has been dominated by the very agencies to be regulated; and, second, because the public has not been willing to pay the price of regulation. Regulation requires careful and intelligent effort on the part of people trained in the work. Defeats in the courts will always follow haphazard regulation which is as likely to be unjust to the public as to the utility. Furthermore, in my opinion, the municipalities uniformly make a mistake in contending for the right to regulate utilities that are not subject as to their entire property to the control of such municipalities. Just as I have long ago publicly announced my conclusion that the several states are not equal to the task of regulating railroads within their borders and that this function should be performed by the federal government, so I also conclude that the city cannot properly regulate a hydro-electric power company, for example, which operates in a dozen cities and two or three states.

It will be impossible, however, for me to enlarge on this point here because it will too much prolong this discussion, but I believe it would be wise for the representatives of the cities to have in mind the uselessness of trying to exercise a function which they cannot properly perform.

In conclusion I desire to suggest that both the utility and the governmental agency have always in mind the maximum of service for the minimum of cost, toward which regulation must always tend

until it has reached the limit beyond which it cannot go, and if some other arrangement, such as public ownership, be found which can go further, inexorable economic laws will require the abandonment of private ownership under regulation and the adoption of the other plan.

OPEN DISCUSSION

MR. PERCIVAL R. MOSES, Electrical Engineer, New York City:

There is one thing which has not been discussed in connection with private ownership, and that is the question of rates charged for electric current. These rates vary from one cent to fifteen cents in the same community, and are made apparently without regard to the cost of producing the current. This is something that could not occur, either under proper regulation, or absolute municipal ownership. These rates are not based on the cost of service at all, but on so-called competitive conditions.

In a recently published report of the National Electric Light Association, it is stated "We have come to the conclusion that these results (meaning greatest extension of business) can best be obtained by adjusting the various rates to the *value* of the service rendered." This, you see, has nothing to do with the cost of performing the service. In fact, the rates are to be based on what the traffic will bear, and not on the cost of the service. This is a destructive principle. It means that if we take the transportation facilities for an example and a firm has its own omnibuses or its own carriages, it would be entitled to lower rates of transportation, or if a firm put up its own power plant, it would be entitled to lower rates on electricity, or if a gas plant to supply its own gas, it should receive lower rates on gas. In fact this is precisely the position taken by the private utility companies. This question seems to me to be one of the most important questions before us in this whole discussion.

I think, too, that the question of regulation of private utilities should be viewed from the point that the city is really the owner of the private utility and should be represented in its direction. I see no reason why the city, as a city, should not be represented in the directorate of a private utility corporation and have as much voice as the owner of the company himself, for in that way alone we can get efficient regulation.

Under the present condition, things are merely a burlesque,

as the public service corporation of New York is, as you know, a mere byword. We have one real commissioner in New York, but the balance of the commission is merely a bumper between the electric companies and the citizens.

For five years the fight has been going on for fair rates in that city, and nothing has been accomplished, because of the obstructive tendency of the commission. These statements may seem very plain, but they are what is in everybody's mind and published in every paper.

MAYOR HOCKEN:

We have had a very interesting illustration in our city of Toronto recently of the point which the gentleman from New York raises, and I think it will be of interest to this meeting.

Our hydro-electric power system has been established to sell power at cost. It is operated by a commission of which the mayor is an ex-officio member, and it buys its power from the Provincial Commission, which in turn buys it from a development company at Niagara Falls. Recently a very large contract was made by a company, the Canadian Stewart Company, which is doing a large work in our harbor, and when the Hydro-Electric Commission came to compete for that business, we could not do so successfully, because we would not go below the price to the Canadian Stewart Company, that we are selling to the people of our city, but the competing company, for some reason or other, and I am not going to ascribe any motive to them, made a price for this contract that was lower than the price we have to pay for the raw power from Niagara Falls. The point I want to make is this: where you have a municipal system, it will be operated upon an absolutely fair basis. A privately owned company is seldom operated upon a fair basis, because it sells power to one favored customer for one quarter of the price it is getting from other customers, and is, therefore, continually discriminating against customers, which is not only unfair to our city, but must be very unsatisfactory to all who get their power from that company.

MR. H. W. ASHLEY, of Rathbun, Jones Engineering Company, Toledo, Ohio:

There are a number of commissioners of various states present, Mr. Chairman, and I suggest that it would be of great interest to

this audience to know upon what basis these public service companies are authorized to make the rates they now charge, as illustrated a moment ago by the gentleman from Toronto.

It is a course pursued in almost every state to have two meters on one premise, one meter that will register the current that comes from the same engine and the same power house at three cents per kilowatt and adjacent to and immediately alongside, with all the same expenses attached, is another meter which registers at the rate of ten cents. Those rates are authorized by the state public service commissions, some members of which are present, and it would be of great value to this audience, and I as a delegate would like to know upon what theory such rates are charged and upon what principle these rates are authorized.

HON. D. W. WILBUR, Mayor of Poughkeepsie, New York:

I am serving my first term as mayor of Poughkeepsie and the first year of that term. Before I had been in office five months, the contract for street lighting was about to expire, and it became my duty to take up the question of the renewal of the contract. The electric light people voluntarily came before the common council to discuss the question of renewal which they desired to put in force upon the basis of the old contract.

Upon questioning the president of the local company, Mr. Beal, he gave me the following figures as analyzing the cost of producing the current used by the city of Poughkeepsie, their claim being that they were serving the city at cost, and did not desire to make a profit out of the municipality.

These are the figures making up the united cost of a single arc lamp, which costs \$76 per year for burning 4,000 hours or an average of 11 hours per day:

Current delivered to lamp	\$0.0142 kw. hour	\$18.14
Distribution costs	0.0156 kw. hour	19.87
Interest	0.0102 kw. hour	12.94
Depreciation	0.01 kw. hour	12.70
Sundry Expenses	0.005 kw. hour	6.15
Taxes	0.005 kw. hour	6.20
	<u>\$0.06 kw. hour</u>	<u>\$76.00</u>

Figuring this out from the kilowatt hours used, from the standard of lamps in service, it comes to almost exactly 6 cents per

kilowatt hour for the current consumed, whereas it is a well known fact that the electric light and power company in Poughkeepsie is doing precisely the same thing that this gentleman here today stated other power companies are doing in other cities, that is, selling current for power purposes in some instances as low as 1 cent, in others $1\frac{1}{2}$ cents, and $1\frac{3}{4}$ cents per kilowatt hour.

The question I want to bring to the attention of this assembly is this: If the current delivered to the lamp costs \$0.0142 per kilowatt hour, how can they sell current at 1 cent to power users? The \$18.14 per year for the current delivered takes in station charges, coal maintenance, etc., which is expressed per kilowatt hour at \$0.0142. They are selling current to certain users at less than the price they claim it costs to deliver it to the lamp.

If they can do that, why cannot they do the same thing with the city? In other words is it just for any utilities corporation to charge the municipality 6 cents per kilowatt hour, when it is selling current to power users or traction companies at 1 cent per kilowatt?

That is a subject I would like to have some light on. I may say that I have not yet renewed the contract. The subject is still under discussion, and I am very anxious if any public service man is here to have him tell me if I am on the wrong line in trying to get this particular corporation to establish a lower rate. I would like information, and my one desire is to treat this problem with absolute fairness, both to the city and to the public service corporation.

MR. CHARLES DAY, of Day & Zimmermann, Philadelphia:

I believe a simple illustration will serve to show why different rates for different classes of service are consistent with the theory of uniform rates from the standpoint of cost plus a reasonable profit.

Certain operating expenses, such as those incurred through reading meters, making out bills, collecting accounts, as well as many other charges, do not vary in direct proportion to the amount of current consumed. For example, it costs no more to make out a bill for a large power consumer than for a residential customer. Then again, there are other items of cost which increase only after the consumption exceeds a certain amount, so that they are also stationary within fixed limits. For example, the interest on money which must be spent to connect up a customer is independent

of current used by the customer until the consumption reaches a point which requires the installation of larger wires, meter, etc.

Let us assume that charges of this kind, which might be termed "stationary charges," for a given class of customers amount to 90 cents per month per customer and that 3 cents per kilowatt hour would yield a fair return upon those costs which increase in direct proportion to the current used. Then if 10 kilowatt hours were consumed by one customer during a given month, the bill would be 90 cents plus 30 cents or \$1.20, which would be equivalent to 12 cents per kilowatt hour. If, however, this customer used during a subsequent month 100 kilowatt hours, then his bill would be 90 cents plus \$3 or \$3.90, which would be equivalent to 3.9 cents per kilowatt hour.

For very large consumers, the stationary costs, although greater than for small consumers, are almost nominal as compared to the current costs. It is for this reason that large consumers are fairly entitled to much lower rates when considered from the standpoint of kilowatt hours, than residential customers. An important factor in this connection, which must not be overlooked, is that the small consumer usually takes current either during peak periods or, in any event, but for a short part of the day, whereas the large consumer uses current for a much larger proportion of the day and off peak. In the latter case it must be obvious that the interest and depreciation charges per kilowatt hour incurred through the operation of the necessary power plant equipment, lines and transformers would be much smaller than in the former. Except for this condition, the charges relating directly to the cost of current are no greater for a residential customer than for the largest power consumer.

It must be apparent, therefore, that rates cannot be equitable to all concerned unless they conform to the characteristics of operating costs, some of which vary with the number of customers, some with the expenditures which must be made in order to serve the customer and others in direct proportion to the amount of current which is sold. General argument and discussion will not lead to any useful result. What we must have is an intimate knowledge of the factors which comprise operating expenses in each case. I have endeavored to emphasize in my paper the paramount importance of this basis of rate-making.

When questions of this kind, which arise through the routine management of public service properties, are solved in a manner which will accord directly with the facts at issue, then the way will be paved for the prompt and satisfactory solution of many of the broad and less tangible issues which have been discussed by the previous speakers.

MR. ASHLEY:

I understand from your paper and from the tone of your remarks that you favor a basis of rates, or a principle of rates by the public service corporation, that would be figured on the cost of the service. Is that right?

MR. DAY:

I think, of course, that that is the principle that everybody seeks to have in effect. Argument would be useless on the method of reaching that basis.

MR. ASHLEY:

What I did inquire, and what I rise to make more plain is, I wanted some member of some commission to tell me why two meters might be placed in my residence, one registering current at 3 cents and another registering current at 10 cents; one of them may be used for cooking and the other for light, but both consuming the same amount of current and taking the same expense to read the meter, and the same amount of wire to carry the current. Why is one authorized at 3 cents and another at 10 cents?

MR. DAY:

Of course, the only justification in that case would be the hours of burning.

MR. ASHLEY:

There isn't any difference in hours, because they all burn at the same time. My dinner comes to me right where I want it—under the light.

MR. DAY:

Well, then, on the basis of reasonable service, under the conditions you state, those two rates cannot be reconciled.

MR. ASHLEY:

If we could agree that the rates of public service corporations selling light and power could be made up on the basis of cost of service, or classes of service, which is probably the only practical means of dealing with the question, the problem would very largely solve itself. It is not a very difficult question, I take it, to take these three, four or five classes of service, and the different factors that enter into them, and determine a relative and just rate or price based on the relative cost of that service?

MR. DAY:

Unfortunately it is an enormous task to get the information, but it is not an insurmountable one.

MR. ASHLEY:

We are agreed then upon the basis; it is not as announced in the meeting of the National Electric Light Association,—on the basis of all the traffic will bear,—but on the basis of what the costs are?

MR. DAY:

Absolutely on the basis of cost, plus a reasonable profit.

MAYOR HOCKEN:

Mr. Day, in speaking of rates, I thought perhaps was referring to and answering what I had said. So I would like to quote for his information and for the information of the delegates, our rates for alternating current power, which are identical in principle to all our different classes of power. We make a charge to the ordinary small manufacturer of \$1.35 per horse power per month, or 10 horse power, whether or not the current is used, plus \$1 per horse power per month for the excess consumption, plus a unit charge of 1½ cents per kilowatt hour for the first 50 hours' service, plus 1 cent per kilowatt hour for the next 50 hours' service, plus ½ cent per kilowatt hour for all excess service, subject to discounts for prompt monthly payment and according to duration of contract, as above mentioned.

LOCAL AND STATE REGULATION OF MUNICIPAL UTILITIES

REMARKS OF HON. JOHN PURROY MITCHEL, AS PRESIDING OFFICER

Fellow Mayors and Ladies and Gentlemen: When Mayor Blankenburg requested me to join with him in issuing the call for this conference, I did so very gladly because of the dual purpose that I understood would underlie the deliberations that are going on here in this city at the present time. I understood that the mayors of American cities were invited to come here to consider the establishment of what I may call perhaps a clearing house of information concerning public service corporations—a clearing house through which the various cities of this country could learn authoritatively the facts on which their judgments and their actions in dealing with the public service corporations of the country might be predicated. We in New York have felt the necessity for some agency through which we could obtain authoritatively this information, for we have lacked it many times in the past. Today, when we are dealing with our electric lighting corporations, we lack certain essential and fundamental facts on which to predicate our judgments. The commissioner of water supply at this moment is called upon to sit in judgment to fix the rates of the private water companies operating in the great Borough of Queens—a power and a duty conferred upon him by the statutes of the state; and yet he lacks the information at present which would permit him to fix those rates authoritatively and to relieve the people of the Borough of Queens from the burden of overcharges from which they allege that they are suffering at the present time. I have in mind, too, my own experience as president of the Board of Aldermen, when the city of New York was dealing with the great problem of rapid transit. There were there a multitude of questions, all of which for their settlement required an intimate knowledge of the business of the public service corporations with which we were dealing. Millions of dollars turned on questions of obsolescence and depreciation. We went out and tried to get our facts by asking the advice of

men versed in railroad business, and it was only with the greatest difficulty, and after the most careful investigation, that we finally secured the body of facts on which our judgment was predicated, and even then, as many of you will doubtless recollect, there was a wide and radical divergence of opinion when that question finally came up for settlement.

The other purpose of this conference, as I understand it, was to discuss the question of state regulation as against local regulation of public utilities.

Now, my friends, we have reached in the United States, very much more quickly than seemed possible six years ago, a condition where regulation of public utilities is taken as a matter of course. Forty-five of the forty-eight states now have public utilities commissions, and in a number of cities, particularly in the west, there are municipal agencies for fixing rates and controlling the character of public utility service. We have progressed so far in this direction that a non-regulated public utility is almost as foreign to the thought of managers of public service corporations as it is to public officials and communities for whose service these corporations are established.

In the last ten years there has been implanted for all time in the conscience and the will of the American people an ineradicable hostility to the exploitation of communities by public service companies and to prodigality in franchise grants. As we have reaped the benefits of regulation and have established new standards for franchises, the old hostility to public utility corporations has very largely waned. This has been helped by a decided change in the managerial policy of many of these corporations, which have sought to win the approval of the public by effective service and fair treatment, rather than to extort maximum profits with a minimum of service. This is not only a well-considered policy from the standpoint of good business, but from the standpoint of public opinion as well.

The American people are no longer content to suffer imposition at the hands of public service corporations on the theory that these corporations are public benefactors ministering to wants unsatisfied because of public impotence. I think that we may safely say that in every great city in America public opinion has reached this point, that it expects and demands a very high grade of service from its public service corporations, and clean, efficient and straightforward

management of its utility enterprises. It is prepared, in case such service is not forthcoming, to utilize the resources of the community to provide the necessary conveniences of community life through public ownership.

Public ownership is no longer a creed or a propaganda directed against an entrenched and irresponsible public-be-damned policy of corrupt utility companies. It has become now a reserve power, of which the cities are conscious, to be called on in case private management fails to improve the standards of service which contemporary public opinion demands.

What cities want is a high quality of service at rates which are just in the sense that they make adequate returns on fair investment and provide for the proper upkeep of operating properties. There is no considerable public opinion in favor of exploiting the public utility companies in the temporary interest of the public, because men who have given thought to public utility questions realize that you cannot mulct a public service corporation, any more than you can any other corporation, of its just profits and expect efficient management; that you cannot demand low rates at the expense of proper funds for depreciation, for obsolescence and for maintenance; that you must have fair wages and just labor conditions before you can think of rate reductions. In other words, that the first considerations are service rendered to the public and a wholesome, sound management of the enterprise; after that you can consider rate reductions or revenues for the benefit of the city treasury.

I did not mean to be understood to say that we now condone the short-sighted policy of those who in the earlier days of our great city practically gave over in perpetuity the most precious asset in our community life, the right to perform services for profit which every member of the community requires. We realize in those cities where the cost of government is mounting rapidly, because of the complexity of social conditions resulting from their enormous size and as a result of the tremendous expenditures required for the physical development of vast territories, how valuable would be the possession of those enterprises to provide revenue for the benefit of the whole public.

Think of what the condition was, before these awful later days, in German cities. For example, in Dresden a considerable part of the municipal revenues is derived from the profits of publicly

owned utilities, and the service of those utilities is in conformance with the demands of that community. But in New York our taxes increase to meet the burden of the vast annual charges for debt incurred for streets, schools, hospitals and subways, and there is only a meagre countervailing revenue from the enterprises which derive their sustenance from the use of the property which belongs to all the people of the city.

But I close the door to all this, for we are not advocating the conversion in New York of those enterprises from private to public ownership; but we are definitely committed, as we have been for the past seven years, to a policy of rigorous control of their management through the service of a state commission.

In New York our public service commission is divided into two divisions of equal number and equal power. The first division has jurisdiction only over the greater city, and the second division over the rest of the state. Both commissions are appointed for a term of years by the governor of the state. The commission controlling the utilities of New York City is not only irresponsible in New York to the electorate of that city, but it may levy on us practically without limit for funds it deems it necessary to expend for its purposes.

We have benefited a great deal in New York from the work of the public service commission, but I believe that this benefit has been as much indirect as it has been direct. The presence of the commission and the temper of public opinion that its creation represented brought about a decided change in the policy of our great public service corporations. Perhaps nowhere in the world is the problem of public utilities regulation so complex and so extensive as it is in New York, where we have one hundred and two (102) separate companies with a combined capital stock and funded debt amounting to \$1,100,000,000.

Our commission in New York is now primarily a commission of construction, for it has committed to it the enormous function of a rapid transit board charged with the development and construction of the city's rapid transit system. It is now engaged on the huge enterprise of building approximately four hundred track miles of new subway and elevated lines which are to make up our extended rapid transit system. Its principal energies are directed to this problem, and in the execution of this task it is working in coöperation with the two principal street railway companies that control the vast majority of the city's rapid transit lines.

In a sense, therefore, the state and city have gone into partnership in New York with the public utility corporations. They have pooled their interests so far as the new rapid transit routes are concerned. We are now looking forward definitely to the time when there will revert to the city all the subway and elevated lines embodied in the extended system, the cost being amortized during the period of the franchise which will terminate finally about the year 1966. Meanwhile the lines are in the hands of private companies, those parts of the system built and owned by the city being under lease to them.

That the public service commission has been a great benefit to New York cannot, as I have said, be questioned. Some of us have felt at times that it lacks in aggressiveness, that it is insufficiently constructive, that it speaks not so much of the strength and purpose of the community as it does the mandates of the law which created it. We do not feel that it is a part of us, that it is closely enough in touch with public thought. I, personally, felt this to such an extent that on becoming mayor I undertook to have organized in the law department of this city a special division on public utilities, which is prepared today to prosecute complaints before the public service commission as a regulative body, and is intended to represent the people of the city of New York in their relations with public service corporations.

A state commission, I think, may be said to acquire after a while a somewhat supernatural, almost a deistic character. It grows remote and in a measure intangible. For this reason I have thought sympathetically of a plan to establish a local commission, which will be responsible to the people of the city, which will speak the voice and interest of the people of the locality and be alive to the demands and necessities of the community which it is established to serve. After all, there is a very intimate relationship between the corporate life of a great city and the smaller but very powerful and influential corporate entities which operate public utilities in the community. You cannot divorce them. The state, on the other hand, is in large measure an abstraction. It has no personality, no heart, no appetite, no desire as the city has.

But I must not anticipate the discussion which is to follow. I have ventured to speak aloud these thoughts on this subject in order that I myself, with you, may be prepared for the interesting discussion which is now to follow.

THE ADVANTAGES OF STATE REGULATION

BY HALFORD ERICKSON,

Member, Wisconsin Railroad Commission.

The policy of regulating private economic enterprises through the agency of government is as old as the common law. The common law represents the prevailing public opinion which in turn is influenced by the ideals of the period. Public opinion, however, has always demanded that government protect equally against those forces which threaten life as well as those which threaten the means of living. During the Middle Ages the policy of regulating economic activity was general and comprehensive. During modern times the policy has largely been reversed. Competition is now depended upon to regulate prices and conditions in practically all undertakings except those which, like public utilities, are monopolistic in their nature and which furnish necessary service. In the case of such utilities public welfare demands that the government shall step in and furnish such protection as may be needed. The government regulation which is implied in such protection, in order to be both effective and reasonable, must be adjusted to the nature of the service and the conditions under which it is furnished.

The power to thus regulate is vested in the sovereign, or under our form of government, in the state. State regulation of this kind may take the form of specific legal provisions alone or it may take the form of such laws administered by a state commission. The state may also delegate the duties and work of such regulation to any of the various local units of which the state is composed, such as cities, villages, etc. When such regulation is so delegated to the local units it may take the form of franchise or ordinance provisions alone, or may consist of such provisions administered by a local commission or department.

The purpose of such regulation is to see to it that the public is adequately served at reasonable rates, without unjust discriminations, and that the securities issued are as closely as possible adjusted to the amounts necessarily and properly invested. The regulation of such security issues is of such a nature however that it probably need not be discussed here.

That service is usually regarded as adequate which conforms to certain standards which have been found to be reasonable or fair under the circumstances. Such standards for each class of utilities should be developed in the light of the state of the art and of the technical operating and other conditions involved.

Reasonable rates under normal conditions are rates that yield reasonable amounts for operating expenses including depreciation, and interest and profit on the fair value of the plant and the business. In other words, such rates must in the long run be high enough to cover the cost at which the factors of production can be had. The cost of these factors thus constitutes the cost of the service and is ordinarily the legal as well as the economic basis for the rates.

While it is generally admitted that governmental regulation of the services and rates of public utilities is necessary for the protection of the public, there are differences of opinion as to what form such regulation should take. Some prefer state regulation through a commission; others again hold that such regulation should be entrusted to the municipality actually served by the utilities. In order to pass upon this question it would seem to be necessary to know how such regulation can be most effectively, most equitably and most economically performed. My purpose here simply is to point out a few facts and conditions that may tend to throw some light upon these matters. In doing so I will briefly outline the nature of the duties involved, and call attention to a few of the leading features of the work that is required in properly performing these duties. If in doing so I shall seem to favor state regulation it is because the facts as I have found them point in this direction.

The injuries wrought by inadequate service may be as serious as those caused by unjust rates. Impure gas with less heating value than the rates justify, and on which the pressure is too low, is unprofitable to the user. In the electric service too high voltage may injure lamps and other equipment while too low voltage results in dim lights and poor service in other respects. Low pressure in the water service may result in serious losses through fires and in much other inconvenience. Insanitary water⁶ may be even more harmful. Defective telephone service with delays in answering calls results in wastes of time and other annoyances. This is also true of inadequate street railway service. Poor street railway service may even lead to undue congestion of population, especially in the

larger cities. This may also be said of failures to provide reasonable extensions of the service when needed.

Poor service is uneconomical, irritating and a fruitful source of dissatisfaction and complaint. It is often responsible for the greater part of the ill-feeling between the public and the utility that exists in so many places. Such service, however, can as a rule be furnished at lower cost by the utility than good service and it is in this fact that the incentive to poor service is found. To furnish inadequate service, especially when the rates charged are high enough to cover the cost of adequate service, is an unjust imposition upon the public. For the consumers are as much entitled to get what they pay for as the utilities are in charging reasonable rates for adequate service. Any other view would be unfair as well as inequitable.

In order that the utilities may be fully informed as to what is required of them in the way of service, state commissions have as a rule prescribed standards of adequacy for electric light, gas and telephone utilities, and conformity with these standards is in all cases enforced. In water works the service is not allowed to fall below a fairly definite level of efficiency. In the case of the standards of gas, electric and telephone service many state commissions have conducted extended investigations in order to obtain the facts and material necessary for an intelligent study of the matter. Not only the operating conditions of the utilities, but all of the technical and non-technical phases of the matter were looked into. Owners and operators of utilities, as well as experts and persons of experience not connected with such utilities, have been consulted at almost every step.

The Wisconsin commission's requirement for gas service is that the gas have a heating value of at least 550 British thermal units at all times, and a monthly average of at least 600 British thermal units. This gives a grade of gas which is high enough in heating value to be satisfactory for cooking, for mantle lights or for power, and at the same time is not too high to be manufactured efficiently. The pressure at which gas is furnished to the consumer at all times must be sufficient; the maximum pressure must never be more than twice the minimum. The commission also prescribes the amount of sulphur and sulphurated hydrogen which the gas may contain. Gas meters must be periodically tested by the gas company, and an error of more than 2 per cent must be corrected.

In the case of electric utilities, the standards require a voltage sufficiently constant so that the maximum shall never be more than 6 per cent higher than the minimum. Electric meters must be inspected at least once a year and tested at full load, half load and one-tenth load, and an error of more than 4 per cent on any load is not permitted to continue. Incandescent lamps must be inspected and the consumers must be given information as to the conditions under which their lighting installations can be used most efficiently.

In the case of telephone service, where delays in answering calls or making connections, poor transmission, frequent calling of wrong numbers, and other similar inadequacies of service are found, the telephone companies are required to make improvements which will result in elimination of the causes of complaint.

Inspection of water utilities covers such matters as adequacy of fire pressure, sufficiency of pressure for domestic users, purity of the water supply, accuracy of meters, and adequacy of the source of supply. Fire tests have been made in many cities, and have resulted either in the ordering of improvements in pressure or in assuring the citizens of the adequacy of their water works systems. In some cases, improvement in the sanitary quality of water has been effected through the commission's tests. Demands for the extension of water and other mains are investigated, and when the conditions with respect to their cost, probable earnings and the needs of the public are such as to warrant it, such extensions are ordered.

Another matter that has received much attention is the routing, loading, headway, the number of cars and other equipment that are needed under given conditions in order to provide adequate street railway service. Rules have been promulgated and practices established that have led to material improvements in the conditions.

In order to bring about such improvements in the service, however, it was necessary not only to prescribe proper standards and rules, but to provide for a permanent and constant supervision of the service. The state has been divided into districts with one or more inspectors in each who are competent and who are also properly equipped for testing the service. This work requires special training. The instruments required are sensitive, and the cost of the same for each inspector is not far from \$1,000.

Owing to frequent changes in conditions, however, service stand-

ards no matter how carefully they have been established are not long lived. The standards which were established by the Wisconsin commission were out of date and had to be greatly modified in a less time than five years from the time they were first issued. The changes in conditions which make such frequent alterations in the standards of service necessary can for the most part be traced to the adoption of new methods and new inventions, some of which are also quite far reaching. As a rule, however, they stand for improvements in the service and often at less cost.

Much is now claimed for local regulation of utilities, by the municipalities alone. Instances are pointed out where local regulation is said to be successful and many reasons are given why this form of regulation offers the best solution of the question. There are no doubt instances of successful local regulation. It is also probable that these instances will increase in number as time goes on. At the same time local regulation is beset with many obstacles that are inherent in the situation and that are difficult to overcome. That this is the case is shown by the history of such regulation as well as by the nature of the problems that are involved therein. To many who have given close attention to the matter it is far from clear that local regulation alone is adequate and in line with the best policy.

Franchise and ordinance provisions alone, especially when not accompanied by adequate provisions for their enforcement, seem to fall short of furnishing adequate regulation. Taken as a whole they appear to afford no better means for such regulation than has been the case for state legislation alone without a commission to enforce it.

Franchises are granted for long periods of years, and the provisions named therein are usually supposed to remain in effect throughout the entire life of the franchise. For conditions which remain constant, permanent provisions of this kind are undoubtedly proper, but for conditions which are frequently changing they may become burdensome and unjust to one side or the other. As the conditions upon which adequate service and reasonable rates depend are changing so often that the standards of service and the rate schedules frequently have to be revised as often as once every year or two, it is obvious that franchise provisions of this sort alone are not likely to furnish adequate regulation.

Franchises also as a rule contain so many other provisions of a contractual nature that the provisions therein which relate to service and rates do not often receive the consideration they merit. In fact the rules of service and the rate named therein are oftener based on rules and rates obtaining elsewhere than on facts disclosed by actual investigation of the conditions, including the cost of the service. This method of adopting rules and rates cannot often be proper and this for the reason that conditions as between different places usually vary so much that rates and rules that are reasonable for one place are not often reasonable for other places.

Of the franchises which were in effect in the state of Wisconsin at the time the public utility law was enacted, hardly one has been found which contained adequate provisions for the regulation of service and rates. The rules and rates named therein may have been reasonable at the time they were enacted, and they may even have remained so for some time afterwards, but they were wholly out of place at about the time the utility law went into effect, and had apparently been so for some time. These rules were not only out of date and inadequate but the rates were as a rule too high and unjustly discriminatory. These discriminations extended not only to the different branches of the service and to the different classes and to individuals in each branch, but were regularly found to exist between the municipality on the one hand and the private consumers on the other. While these provisions in the franchises neither were nor could be very closely adhered to, they were always regarded as a part of the contract and were effectively raised by the utility in service and rate controversies. They were also an obstacle to effective regulation. It was for these reasons mainly that the state of Wisconsin under its reserve power has declared unreasonable franchise provisions of this kind to be unlawful or void.

What has thus been said of franchise regulation would also seem to largely apply to such regulation as is afforded by municipal ordinances. It is true that the rules and rates named in such ordinances are sometimes based upon the opinion of experts who were employed to investigate these matters, and that they therefore may have been fair at the time they were enacted. But even if fair when enacted they are not likely to long remain so. Unless, therefore, some provision is made for making such changes in these rates and rates as are needed from time to time they will soon be out of line.

To make such changes is not always as important a task as is the task of making the original rates and schedules and yet it is too important in most cases to be left without supervision to the parties directly involved.

The cost of such special investigations as those which are necessary for this purpose, when made by others than a permanent state department, is also likely to be beyond the reach of at least the smaller cities. Such costs for plants that can be replaced for from \$2,000,000 to \$4,000,000 often amount to as much as from \$25,000 to \$50,000. Ordinances of this kind are as a rule tested in the courts, and not being defined by a properly equipped department are apt to be either set aside or the verdict delayed until their very purpose is defeated.

The chief objections to regulation by municipal ordinances are summed up by Judge McPherson in the Des Moines Water Case, 192, Fed. 193, who, in pointing out the shortcomings of this system of regulation, says:

It is now more than three years since the passage of this ordinance. This case illustrates the evils in connection with the fixing of rates by municipalities to govern public utility corporations, . . . by the time this case is decided by an appellate court, at least four years will have elapsed from the passage of the ordinance until the matter is put at rest by the courts . . . It is well known by all informed men that city councils necessarily adopt rates with but little or no investigation as to what rates ought to be fixed. The result is we have ordinances fixing rates based upon but little intelligent effort for the ascertainment of the facts. Some of the states . . . have state commissions of competent men, who give public hearings, and who do nothing behind doors, nor in secrecy—a commission with no member interested as a taxpayer of the city, and with no member subject to influences other than the ascertainment of the truth and the facts. Rates are thus fixed with which most fair minded people are ready to acquiesce. It is strange that we have no such legislation and no such commissions in Iowa.

When such ordinances are fair and properly adjusted to the conditions, however, and when in addition to this they are enforced by some local body with the necessary powers and equipment for this purpose as well as for making such changes in the rules and rates as become necessary from time to time, then they are also likely to furnish effective regulation. One objection to such a body is its cost. As pointed out above local commissions seem for this reason to be beyond the reach of all but the larger cities or units.

Such commissions would also be handicapped in their work because of the lack of financial, operating, and other data obtained on a uniform basis. It is also a question whether in most cases they could be given the necessary jurisdiction. As stated above, regulation of public utilities is essentially an undertaking that is adapted to centralized or coöperative methods.

That the necessity for regulation is not obviated when the utilities are owned and operated by the municipalities is quite clear from such experience as we have had in the matter. Such utilities furnish no better service than privately owned or operated utilities. In fact, it is often a great deal worse. Municipalities are as a rule slow in responding to new discoveries and improved methods and they often fail to properly list and supervise their meters and other equipment. Examinations of the inspectors' reports, at least in our state, reveal the fact that while some municipalities furnish good service, the service in the greater proportion of them is on the whole on a lower level than is the case for privately operated plants.

When it comes to rates, the situation for municipally operated utilities is no better. When the commission first entered upon its duties it found the state literally streaked with unjust discriminations of all kinds and these discriminations were as flagrant in municipally operated as in privately operated plants. While these discriminations have now been largely done away with, the task of wiping them out was also fully as great for the former class of plants as for the latter. The same is also true when it comes to establishing and to maintaining equitable rates. While the rates charged by the municipally operated plants are often relatively low, this lowness in the rates is not often due to low cost of production of the service, but largely because in one way or another upkeep and other costs are in one way or another shifted from the consumer as such to the taxpayer as such.

In the matter of accounting also the municipality is backward. In fact, the situation in this respect has been such that although the commission has done its best to bring order out of chaos, the progress it has made has been slow. In 1912 about 161 out of the 177 municipally owned water works and electric plants in the state failed to keep their accounts in such a way that they could be made to disclose the results of their operations. Over \$16,000,000 worth of property was represented by the plants which thus failed to keep

proper records. For this property and for its earnings from operations, and for the expenses incurred therein, the accounting was entirely inadequate.

Uniformity in policy in the application of principles and in obtaining information and facts is of the greatest importance in matters of a public nature such as the regulation of public utilities. The situation in this respect is about the same for regulation as for taxation. In the assessment of property for taxation it has been found that uniformity and justice could not be had from assessors employed and paid directly by those whose property was to be assessed. In order to secure uniformity in the assessment it has therefore been found necessary to delegate this work to state administrative bodies. The removal of assessors from local influence by having them appointed and paid by the state and responsible only to the people generally has given them that independence of judgment and action which alone can give an approach to equality and uniformity of taxation. The analogy to the power of regulation is surprisingly complete in this respect. Judiciousness is not a function of political activity or of personal wants and preferences. It is rather a function of painstaking and independent investigations. It requires a consideration of what is humanly possible. It demands financial or political disinterestedness. Fair hearings must be given to both sides. A mind to be judicial must be open and free. In passing upon public utility controversies, a city administration would often have to be both prosecutor and judge and the members of such administration would of necessity be personally interested in the service and rates involved. Such relations do not always lead to equitable conclusions and should therefore as far as possible be avoided.

In many cases the rates are found to be unreasonably high as well as unjustly discriminatory. Rates that are too high and that under similar conditions are higher for some persons and localities than for others are harmful and against public policy. They result in unequal distribution of wealth. They mean that money is unjustly transferred from one set of pockets to other sets of pockets, and that a few are enriched at the expense of the many. They retard industrial development and commercial growth, and, in the same line of business, tend to build up some at the expense of others.

Rates that are too low may also be harmful. They usually stand for poor equipment and poor service. When so low as not to provide means for the proper upkeep of the plant they may even lead to the entire ruin or loss of the service. Instances where conditions of this kind prevail are frequently met with. They are detrimental not only to those who are directly affected, but to the public as a whole. Losses from poor service may be as great as losses from rates that are too high or discriminatory.

In order to determine what constitutes reasonable charges for utility service it is necessary to determine the fair value of the property and business employed therein, and to ascertain what are fair allowances for interest, profits and depreciation on such valuation as well as what constitutes fair amounts for other operating expenses.

Among the facts and evidence which must be considered in arriving at the fair value of a utility's property are the original investment in the property as a whole as well as of that part of it which is now in use, the cost of reproducing the property new, the depreciation that has taken place in the physical property, the cost of establishing the business and the effect of extraordinary conditions such, for example, as a general decline and other changes in the community. Unless the valuation of the property is made with full consideration of all these lines of evidence it may not be fair nor stand the test of a court review.

To ascertain the original investment in the property as well as the actual cost of the items now in place requires the coöperation of trained accountants and engineers. Every item of expenditure must be carefully scrutinized. Expenses incurred for replacements must be segregated from those for extensions or the cost will be overstated. In many cases part of the cost for new plant has been charged to operating expense and unless these costs are fully determined the cost of the property will be understated. Numerous other irregularities are also met with which must be adjusted before the true cost can be found.

The work of ascertaining the cost of reproduction of the property and of the depreciation which has taken place therein is an engineering task. It requires complete inventories of the property, a careful pricing of each item, a determination whether the property is of such type and in such condition that it can be economically used, a determination of the amount of depreciation from a survey

of its cost new and its probable life, a determination of the sufficiency of repairs or upkeep and many other facts of similar character. The pricing of property would be practically impossible without the possession of complete and up-to-date lists of unit prices covering every conceivable item of utility property. In general, it may be said that the work divides itself into and requires about as many different kinds of skilled engineers as there are departments of the science of engineering.

In order to determine what has been the actual cost of building up the business or of the reasonable cost of reproducing the business under existing conditions it is necessary to get a complete financial history of the company from its books and records. There must be at hand full knowledge as to what have been reasonable returns in the past and what would be reasonable returns today. Data must be available showing how long it is normally required to reproduce a paying business, what is a fair relation of expenses to earnings at various stages of the development period. To have these facts requires the most painstaking analysis and continuous research.

When valuations are completed they are useful alike for rate making and capitalization purposes. They can be revised at a less expense and furnish a basis upon which future difficulties may be settled. What has been said about valuations and the service of engineers and accountants in connection with them applies alike to the rate-making and security-issuing functions.

In order to determine what are reasonable amounts for operating expenses it is necessary to know what these expenses have amounted to in the past, not only for the plant involved, but for other plants both similarly and dissimilarly situated. It requires a good general knowledge of the physical operations and what such work can ordinarily be done for. The efficiency of operation largely determines what the total revenues must be to meet the operating costs. Whether or not a particular utility is being operated efficiently is often indicated by comparison of its costs with those of other utilities producing the same product and operating under similar conditions.

How much should be included in the operating expenses for depreciation is a matter that largely depends on the cost and life of the property involved, the state of the art, how the amounts thus reserved may be used profitably until needed for renewals, and on

many other facts and conditions, and must be determined in the light of these facts.

To know what is a reasonable amount for interest and profits on the fair value of the plant and business one should know the state of the investment and enterpriser market. In other words, one should know the approximate cost at which the necessary capital and the enterpriser can be had in each particular case. This requires investigations of a general nature as well as under given conditions.

When the total cost of the service has been determined it is necessary to so classify and apportion the various items therein that proper costs per unit can be obtained. Such unit costs are one of the requisites for scientific rate-making.

The first apportionments in this connection consist of the allocations of the various groups which make up the total cost in accordance with their nature or the factors upon which they depend. That is those parts of the expenses which depend on the number of consumers should be classed as consumer expenses. Those items again which depend upon the capacity of the plant or upon the demand for service should be placed under capacity or demand expenses. Items of cost which depend on the output of the plant and which vary with such output should be classed as output expenses.

The next step consists in properly apportioning each of these three classes of expenses between the various branches of the service. That is the total consumer expense should be borne by each branch in proportion to their respective number of customers. Likewise the demand expenses should be allotted to each branch in proportion to their respective demands mostly at the time of the peak load. In the same way the output expenses should be distributed in accordance with the output for each department. The respective consumer, demand, and output cost for each branch must in turn be distributed over each class of service therein in proportion to the number of consumers, the demand, and the output for each of these classes. The final result will then show, for each class of the customers, the proper cost per unit of each of the three classes of expenses named. These separations of the expenses involve complete demand, output and consumer data for each department and for each class of service, as well as accurate and comprehensive operating and traffic statistics generally. In cases of joint opera-

tion it also means a separation of the common expenses between the utilities involved. In addition to this it is often necessary to study transmission losses, the saturation of the territory, the nature of the uses to which the service is put, whether the service is metered or not, wastes and losses of all kinds, the adequacy of the service and numerous other facts and conditions.

In order that the facts that are needed to pass upon the cost-value of the plants and their business and the cost of the service they perform may be available it is necessary that complete and accurate accounts and records be kept. It is further necessary that such accounts and records for each class of utilities should be uniform throughout the state and that they should be regularly audited and inspected. Uniformity is needed in order that like facts for several plants may be obtained for comparative purposes. Without regular audits irregularities are certain to creep into the accounts. Where there are no rules of accounting prescribed and enforced by public authority, the confusion of accounting practices makes the analysis of a utility's expense next to impossible. Until uniform classifications of accounts were made effective, many utilities did not even distinguish between new construction and ordinary running expenses. The result, of course, was that the reported operating expenses were of little or no value for rate-making purposes. It is only by continually explaining the importance of making proper distinctions of this kind and by assisting utilities through an accounting staff, that the accounts and records will be so kept as to disclose the financial conditions of the utilities and furnish all the facts that are needed for making up proper rate schedules.

Work of thus determining the cost value of the plants and the cost of the service and of prescribing and installing proper accounts and records and of auditing and inspecting the same requires the service of persons who have engineering, operating, accounting and statistical training; of persons who are familiar with values, operating and financial matters, and who are competent to analyze and report upon such facts and conditions. The need of such services is also constant, for experience shows that both the valuations and the general rate schedules have to be revised every few years, that special rates including power rates have to be changed almost constantly; and that there can be little or no let-up in accounting and other supervision.

The causes which thus lead to such frequent changes in the rates are numerous. In some cases they are found in increases in the business and in the lowering in the cost per unit of service which follows therefrom and which often make reductions in the rates possible. In other cases again the business may be falling off with the result that the costs per unit are increased, causing the existing rates to be too low. New inventions and discoveries in equipments and methods also have, as a rule, important effects upon costs and rates, tending for the most part towards reductions therein. Competitive and commercial conditions also play their part. They must as a rule be met by proper rates if existing business is to be retained and new business acquired. Even such facts as the seasons of the year and the time of the day the service is used may materially affect the rates for which the business can be taken on.

It is a fact that adequate regulation of public utilities requires so much work of a technical and administrative nature for the promulgation and enforcement of proper standards of service and equitable rate schedules that many states have abandoned all efforts to so regulate directly through legislation alone and to adopt in place thereof a public utility law administered by a state commission. The course of the states in this respect is almost identical with their course when the need of regulating common carriers was first felt. The regulation of such carriers was first attempted through direct legislation alone without adequate means for the enforcement of these laws. It was soon discovered, however, that such laws could not be made to fit the conditions even for the time being without more extended investigations than the legislature itself was in position to make; that the interests involved in their violation were great enough to keep those who had interests at stake from living up to these laws; and that the situation was in fact such that regulation to be effective and equitable would have to be entrusted to some administrative body with the necessary power and equipment for prescribing and enforcing proper rules and practices.

This experience in the railway field has been repeated in the field of other public utilities. It has resulted in such systems of state regulation of both common carriers and other utilities as those which are now represented by our state public utility laws and commissions. These systems therefore are the result of circumstances and conditions that are inherent in our industrial system.

The problems with which regulation has to deal are in fact so persistent in their tendencies, so far reaching in their effect, and so complex in their nature that in order to cope with them properly a separate regulating body is required that is entrusted with wide powers, backed by a strong government, has the broadest and best sources of both general and special information, and that is fully equipped in every other way to promptly deal with the enormous amount of work that is constantly coming before it.

This work is also of such nature that it can be more effectively and more economically carried on on a large than on a small scale, under a stronger than under a weaker government. In the former case the jurisdiction is wider, the powers greater, the sources of information more complete, the practices more uniform, the needs of local communities in their relation to society as a whole more clearly seen. All this, and often much more is necessary for the most effective and equitable solution of the knotty problems that are constantly arising. That the cost is relatively less under a centralized system of regulation than under any other system is evident from the nature of the work and from the economic principles which govern the cost of activities of this kind. It is also shown by actual experience. The average cost for each case of the work of regulation in Wisconsin is considerably less than \$200. For some cases the cost is of course much higher while for other cases it is much lower. For the Milwaukee gas case, for instance, it amounted to about \$4,500, but this is a large plant and the valuation and the audit in this case were perhaps as complete as any that had ever been made. But even the cost of the Milwaukee gas case is much less than the cost of the valuations and audits made by forces temporarily organized for such work by outside experts. In fact, the charges of such experts for less complete work covering similar plants are often from five to ten times as much as this. These statements are based upon actual figures obtained from inquiries into these matters.

In order that the public utility law might afford the public the maximum amount of protection the legislature under the reserve power amended the existing franchises by substituting therefor the so-called indeterminate permit which is a permit or right to occupy streets and highways for the purpose of furnishing the public needed service for compensation, subject to the provisions of the public

utility law of the state, including those which provide that the utility at a fair price may be taken over or purchased by the municipality, and which also provide that when public convenience and necessity require it, the commission, charged with the administration of the public utility laws, may authorize another or a competing utility to enter the field and furnish like or similar service. Until such competition is so authorized, however, the permit or franchise thus obtained is exclusive in its nature.

The Wisconsin indeterminate permit may be said to be the outcome of the efforts that had been made from time to time to find some franchise or permit for public utilities to operate under that would go further in protecting public interest and in stimulating private initiative than any of the existing franchises. At the time the public utility and indeterminate permit laws were enacted, the franchises in effect varied from the perpetual franchise without restrictions to the short term franchise with all sorts of restrictions. The working of these franchises had gradually developed the conviction that they were out of harmony with the nature and purpose of public utilities. Such utilities for instance are not subject to the ordinary laws of competition and public interests therefore require that some other regulating force be substituted for active competition. Their equipment usually has to occupy crowded streets, alleys and highways in which the conditions are such that nothing can be safely left to take its own course. They furnish service which public welfare demands should be continuous, uninterrupted and adequate and which should also be supplied at the lowest reasonable cost. Such utilities, therefore, should not be burdened with competition that involves more in the way of an investment in the entire service than the amount actually necessary to that end under the most economical and effective system of operation; nor should they be loaded down with special taxes or charges of various kinds that tend to cause unnecessary and unwise increase in the cost of the service and to lower its quality.

Commenting on the legislative policy, and its promotion of the public welfare, the court, in a case decided the present year, said:

The policy of the state, embodied in the legislative regulations of public utilities is that the public welfare as regards these enterprises is best promoted through such means as afford the highest practical efficiency at the

lowest cost, and that this may best be accomplished by uniting existing facilities, under proper control and regulation, to meet the public convenience and necessity, having regard for existing property interests and the rights and privileges appertaining thereto. *McKinley Tel. Co. v. Cumberland Tel. Co.*, 152 Wis., 359-363.

This policy could not be effectively exercised through the ordinary franchise because the provisions therein since they remained in effect for years were too inelastic to be adjusted to the rapidly changing conditions, and because in the very nature of things they could not promote efficient service at the lowest reasonable cost. The perpetual and long term franchises also give the utilities unduly great powers and tend to prevent such readjustments of service and rates as are usually found to be necessary every year or two and even oftener. Representing valuable rights they also lead to over-capitalization and to many other practices under which public welfare can not be best promoted.

Under the short term franchise with its many restrictions and owing to the uncertainties as to what would happen at the end of the franchise period, utilities were not only unwilling to make necessary extensions of the plants, but were often unable to obtain capital for such extensions. Since the franchise terminated before long it was necessary either to amortize the cost of the plant and the extensions which of course meant high rates and poor service, or to give assurance that the franchise would be renewed at the end of its life which made it partake of many of the objections of the perpetual franchise. Again for most communities the future needs and conditions are so hidden that they can not be correctly foreseen even a short time in advance and for this reason the restrictions even in the short term franchises will become unfair to one side or the other long before their expiration. The general result of these imperfections has been to retard the development of the communities, to disturb investment and business conditions generally, to lead to all sorts of political intrigues, dickerings and betrayals, and to result in loose methods of operation and of accounting and to the shirking of many just obligations.

These objections to the perpetual and short term franchises have been overcome by a franchise or permit which permits operation until the utility is taken over by the municipality for a fair compensation. It is also an exclusive permit until public conve-

nience and necessity demand that another utility performing like service be permitted to enter the field. Under this permit utilities are subject to such state regulation as is provided by the public utility law. This permit when taken in connection with the public utility law is in harmony with the nature of the utility business. The essentials of regulation possible of attainment under the indeterminate permit and public utility laws, but to a large extent impossible under franchise and ordinance regulation are the following:

1. The public is entitled to adequate service at reasonable rates which are free from unjust discriminations and which vary with the cost of rendering the service.

2. Since the municipality has the power to grant or withhold the use of its streets and highways for public utility purposes, it may also, where no utility exists and where a certificate of public convenience and necessity has been granted, either reject or accept applications for such use; and through the exercise of this power it is in position to largely control the situation in the interest of the public.

3. The municipality has been granted the power to acquire at a fair price the property and business of the utilities by which it is served and can exercise this power and enter the public utility business whenever it chooses to do so, or whenever it becomes dissatisfied with either the service or the rates, or with any other condition.

4. Whenever public convenience and necessity demand it, the municipality or some other utility can obtain authority to enter the field and to furnish service in competition with the existing utility.

5. The utilities for adequate service are entitled to rates that are reasonable under the circumstances.

6. The utilities are entitled to fair prices for the property that is used for the convenience of the public when it is taken over by the municipality.

7. Except where active competition existed when the public utility and indeterminate permit laws went into effect, the utilities are entitled to the exclusive right to furnish the service until the property is taken over by the municipality or until for good reasons a competitor is authorized to enter the field.

8. Public utilities are entitled to have all investments made

for the benefit of the public kept intact through proper depreciation charges included in the rates for the service rendered. As an offset to the loss of speculative profits that are caused by regulation they should as far as possible be protected from losses that have their source in active competition.

The state legislature in enacting the public utility law went even further than this in order to protect the public, for in this law it extended to the municipality about the same powers over service and other matters as it gave to the state commission, and subject only to review by such commission. In other words, the municipality has now complete powers in these matters, and may exercise the same without any interference on the part of the state commission except as an appellate tribunal when someone appeals from the action of the municipality. This power, however, the municipalities make but limited use of. Instead of acting upon such matters themselves they prefer to bring them before the state commission.

Only a part of the work of regulation is negative. A large and by no means unimportant part is positive. The regulating body must not only compel the utility to desist from acts and practices which are wrongful, but it must show the utility how to substitute acts and practices which are proper. Its duties with respect to accounting and the installation of systems have already been referred to. Suffice it to say that this work is continuous, laborious and not always appreciated. But its effect on the business management is most wholesome. Municipal utilities more than private utilities are the chief patrons of the commission in this respect. The annual reports of all companies are audited and of course much informal advice is given.

In this connection, attention may be called to what one service inspector of the commission did in addition to his routine tests during a period of two months.

In this time he inspected 12 municipal plants and 40 private plants. These figures are for the municipal plants only, because it would take too long to enumerate them for both municipal and private plants. The assistance given to the municipal plants included information on meter testing for six of the plants; one plant was shown how to test 220-volt meters with their 110-volt rotating standard; one plant was instructed in proper methods for testing the phase meters; in one of the newer plants the inspector helped in

making a number of the meter tests to show the utility how it should be done. Meter test record forms were drawn up for three plants and one plant was given advice regarding the metering of street lighting current. Two plants were given information at their own request regarding matters of operation. In three cases the inspector drew up forms for station records. One was given help in the use of graphic recording instruments. One was shown how to overcome difficulties due to the unbalancing of the system, and another was shown how to eliminate the trouble caused by moving picture machines on its circuit. One plant asked and received advice as to the running of its high tension lines across a railroad track. The administrations in two cities were given extensive assistance regarding improvements which they propose making in their plants. A group of city officials was given information regarding changing from a single phase to a three phase system. A new plant had all the rules of service, their importance and their bearing thoroughly explained to them at their own request. Information regarding rates was given to one city, and at the request of the city the features of a proper accounting system were pointed out to it. One city obtained information regarding interference between high voltage power lines and transmission lines. Switchboard instruments were adjusted for another plant. In another case help was given on a complaint meter test which showed that the plant had been using a wrong meter constantly which destroyed the accuracy of its test. In many cases this information was given not only to the operators of the plant but before the lighting commission of the village board. These are probably sufficient to show some of the ways in which a state commission can help to improve the conditions of utility operation in a positive sense.

Besides the assistance in accounting and service matters the commission has given a great deal of engineering assistance to utilities which were not in a position to employ consulting engineering help. To give a full detail of this would require altogether too much time, but a few cases will illustrate. The mayor of one city requested an official examination of the plans and specifications of a proposed water and light plant which had been prepared for the city. At the same time a request was made for a test of a new well for the proposed works. Both of these pieces of work were performed by the commission's staff. In another city, the city author-

ities requested advice from the commission as to the advisability of contracting with the Hydro-Electric Power Company for electric current and of using electric instead of steam power for operating the city water works. They also requested an examination and report upon the condition of the plant and equipment, with recommendations as to any repairs and improvements needed. Both requests were granted, and a complete report was furnished to the city. In still another place a complete investigation of the plant was made at the request of the village, and a detailed report showing what changes were necessary was submitted to the village. Similar pieces of work were done for a great many cities and villages in the state without any direct cost to them. In fact the commission has more applications for such work than it is in position to carry out.

State regulation as it is thus known today, while it has its shortcomings and often fails to give general satisfaction, has on the whole been fairly successful. It has led to general improvements in the service and to more equitable and on the whole lower rates. The investigations which have resulted from it have also thrown much needed light upon the many important problems that are involved in the operation and regulation of public utilities.

The net results, for instance, of the various measures by which the Wisconsin commission has kept up the adequacy of the service have been a marked improvement in the heating value, pressure and purity of gas in many cities in the state, the regularity of voltage of electric utilities, and general improvement in telephone and street railway service and the purity and pressure of water. Much of the result of the commission's work in this direction does not appear on the surface because it consists in preventing deterioration of service as well as in improving poor service. It is estimated, however, that the saving from actual improvements in the gas and electric service alone has been many times as great to the people of the state as the cost to the state of its entire service work, to more even than the cost of all the work of the entire commission. No money value, of course, can be set upon the fire protection and the prevention of disease which have resulted from the commission's requirements as to pressure and purity of water, or on the improvements in street railway and telephone service that have been brought about, but there are reasons to believe that the benefits here also have been very great.

In the rates there have been both decreases and increases, but the former are by far the most important. In fact, the decreases amount to many times as much as the increases, and the net decrease foots up to a large sum. Detailed figures upon these points are available but space cannot be given to them here. The decreases in the rates affect mostly the larger plants while such increases as have been authorized cover for the most part the smaller ones. In fact, the latter are largely made up of small rural mutual telephone companies and municipally owned water works, in which the customers are also the stockholders, and which were established under circumstances under which they could not be placed on business bases, and for which the increases were absolutely in order to protect and keep up the service. In many of these cases the increases were also applied for by the customers themselves. To have denied these applications would have meant loss of service and would therefore clearly have been contrary to public policy. It would have been cause for just censure. When conditions are such as to require it, it is as much in line with good practice and public policy to increase rates that are too low as to decrease rates that are too high.

The regulation in question has also been the means through which most of the more serious or unjust discriminations in the rates that formerly existed have been done away with. These discriminations were often great. They frequently affected every branch of the service as well as the different classes of customers in each branch. To eliminate such discriminations and to replace them by more equitable rates is in itself a big task. It is in fact so important an accomplishment that it is likely to much more than justify the expenses that were incurred therein. Unjust discriminations in rates are serious from business and social points of view. The circumstances under which they arise are as a rule such that constant supervision is required in order to keep them out of the ordinary rate schedule.

The commission in passing upon its cases is sparing no efforts to secure all the facts in the matter that tend to throw any light on the situation. These facts become a part of the records in the case and constitute important evidence in the defense of those cases which are carried to the courts. They account very largely for the fact that the orders of the commission have been sustained in practically

every one of more than thirty appeals to the courts, which the utilities have taken. Such facts have also been of material aid to the state legal department in its generally successful efforts to defeat the application for the staying of these orders of the commission, while the case was pending in the courts. Much of the credit for these successes in courts is of course due to the fact that the state has a very effective attorney-general's department. Such regulation has also resulted in many other advantages that are of considerable importance. It has among other things done much to determine what in actual practice the much used term "reasonable" signifies. While it is not maintained that anything like a solution of the full meaning of this term under various conditions has been reached, yet many of the chief features involved are now fairly well understood. The application of economic principles to questions essentially ethical is certainly an important contribution of state regulation towards the solution of public service problems.

State regulation has moreover afforded an easy, inexpensive and fair means for an informal settlement of many disputes. That such settlements have increased in number with the passage of years since the law was passed only attests the increase in importance of public utility service.

The investigations and publicity which have in general characterized the councils of regulatory bodies have been good for the public as well as the industries. The rights and duties of the contending interests have been defined, facts previously hidden under the veil of secrecy, of distrust or of misunderstanding have been revealed, with the result that there is beginning an era of a better understanding of the situation. Furthermore, there are constantly evolved more definite principles according to which the future relations between producers and consumers may be more easily adjusted.

It should not be assumed from this that state regulation is regarded as a sacred institution that it might not be safe to either modify or abolish. Far from it. If economic history teaches anything it is that institutions of this kind are simply the outcome of existing economic conditions and that they as a rule do not long survive these conditions. The conditions and tendencies in the public utility field, however, which have brought about state regulation are still present and bid fair to remain so for some time. The public utility field for instance is still a legitimate field for private

initiative and investments. There is also a marked tendency therein toward centralization in ownership and operation, and these tendencies are greatly promoted by the development of hydro-electric and central power stations which furnish energy or power to numerous plants in certain sections throughout the various parts of the country. The electrical and other utilities while in a sense firmly established are still subject to upheavals which flow from inventions and from the competition of new sources of supply and the risks involved therein are considerable. These forces are state-wide, and they greatly affect the conditions of regulation. As long as they exist it would seem important that the regulating power also should be state-wide or as broad as the forces with which it has to deal.

It has already been intimated that regulation in order to be effective must be coextensive with the operations of the utility which is to be controlled. In other words, the jurisdiction of the regulating body must be broad enough to cover all the matters with which a comprehensive system of regulation has to deal.

The municipality has inadequate jurisdiction because its boundaries do not mark the limits of utility operation. Utilities are becoming almost state-wide, particularly the powerful utilities which it is most important to control. Leaving out of consideration the small mutual telephone companies which serve the rural districts only, there were 333 telephone exchange systems in Wisconsin in 1913, of which 294 served both rural and urban subscribers. These systems had 51,333 rural telephones and 135,845 in cities. The cities could not regulate the rural business nor could the farmers control the business within the city, nor can either regulate the rates between both. There are a large number of these telephone companies which do the switching work for rural lines which run to their switchboards. If the rates for rural service are too low, the city patrons are discriminated against, and vice versa. If rural lines are in poor condition, city patrons cannot secure good service over those lines. Yet the city cannot possibly regulate the rates or service on lines outside the city. The only body which can do anything in these cases is the state.

In order to insure adequate telephone service it is often necessary that physical connection between telephone lines be secured. The city and the township are alike helpless in attempting to define the terms which should govern in physical connection cases which would affect them both.

Nor is the telephone industry the only line of utility business over which cities have insufficient jurisdiction for purposes of comprehensive regulation. Replies received to a circular letter sent to all utilities in the state operating electric, gas or water departments, indicate that nearly 40 per cent of such departments operate beyond the boundaries of a single city. Replies were received covering 277 such departments and of these 106 were not confined to a single municipality. Among these 106 were many of the larger utilities. Some idea of the extent of the operations of various utilities may be gained by a review of the facts with regard to a few of them.

In Wisconsin one power company operates in seven cities and villages and in the intervening towns. Each of three other companies of this kind operates in from three to twelve cities and villages and in the towns which they pass through. One company operates in over twenty cities and villages as well as in towns between them.

In Michigan the Commonwealth Power Company supplies 21 cities and villages, and the Grand Rapids-Muskegon Power Company supplies 14. The Iowa Railway and Light Company supplies gas, electric or electric railway service in 48 cities and villages. The Central Illinois Public Service Company has properties in over 100 cities and villages. Suppose that each of these cities and villages started out to regulate this company, or so much of it as was within their limits, 100 different regulative bodies controlling the same corporation or its branches, local control would be running riot!

In his work on *Municipal Franchises*, Mr. Delos Wilcox expresses this view very clearly. He says:

After all the day of walled cities is past and now an urban community is primarily a congested spot on the state map, a center of population and industrial activity intimately related to the personal and property interests of all the citizens within its sphere of influence, which often extends to and beyond the boundaries of the commonwealth itself. Public utilities although still comparatively simple industries have gone far enough beyond merely local bounds to require complex governmental machinery to operate or regulate them.

The situation with respect to utilities is similar to the situation which now confronts regulating bodies with respect to railroads. The majority of railroads and the majority of their operations have long since ceased to be primarily only state-wide in character. The

nature of the railroad industry and its natural development was necessarily such that it could pay no attention to the imaginary state lines which mark the limits of state jurisdiction. It has however been held that interstate operations in so far as they are performed within a state are beyond the jurisdiction of the state. The jurisdiction of the federal government is even regarded as paramount to the jurisdiction of the state in those cases where decisions of state regulating bodies with respect to purely state traffic are in conflict with the decision of the federal regulating body with respect to interstate traffic. This conflict of jurisdiction and the inadequacy of the smaller jurisdiction to adequately regulate business which had outgrown their jurisdiction should be frankly recognized. The case of the states as opposed to the federal government is substantially the same as the case of the local governments against the state government and in the latter case too the inadequacy should be frankly recognized. The case of the state is somewhat strengthened by the fact that under the federal system the state is supreme within its legitimate sphere, and the regulation of state commerce, until otherwise provided for, is its particular province.

Following the example of state governments, local units could adopt and in some cases have adopted the method of regulation by city commission. This alternative has come to the front particularly since the advent of the commission form of local government. While some of the objections which have been raised against the franchise or ordinance method of regulation are not applicable to commissions, the more salient objections still remain. Such a commission would have no jurisdiction beyond the limits of the city. Applying this method to the city of Milwaukee, where, if anywhere in Wisconsin, it could be made to apply, we would have this situation:

The Milwaukee Electric Railway and Light Company embraces:

- (1) The Milwaukee city railways,
- (2) Eleven suburban lines,
- (3) Four interurban lines with 175 miles of track,
- (4) Four city lines in Racine,
- (5) Two lighting systems,
- (6) One heating system.

Seven of the eighteen city lines extend beyond the city limits. Nine of the suburban lines have in addition to their regular city run, a second fare zone, beyond the city. The congested business

and residence districts of a city like Milwaukee must have good transportation facilities to the suburban outlets in order to insure proper living conditions. No system of local control could have jurisdiction to link the urban and suburban lines so as to secure this service. Again, what about the passenger who rides between points in the city on a suburban car? What if the city's requirements of local service interfered with proper suburban service on suburban and interurban lines? There are fourteen power plants and sub-stations, some of which furnish current for both railway and lighting, and supply steam for heating. There are thousands of feet of transmission lines, overhead and underground, which are used jointly for lighting and railway. There are 600 cars, 360 miles of track, and over 360 miles of trolley wire, of which large portions are used interchangeably by the railway systems which give urban service in Milwaukee over 18 lines, in Racine over 4 lines, in Watertown over 1 line, suburban service over 9 lines and interurban service over 4 lines. The Commerce Street power station supplies current for city lighting, city railway and interurban railway within a radius of 20 miles. The Milwaukee shops are used for the entire system. Hydro-electric power is brought from the Kilburn dam over 100 miles distant. The difficulties multiply the more we consider the minutiae of regulation.

Few cities could afford to maintain competent commissions, who would take up the subject of regulation thoroughly. If in the state of Wisconsin, for instance, we grant that cities whose population exceeds 10,000 could maintain local boards, an aggregate urban population of over 400,000 would have to go either without regulation or be given some system of state control. The same would apply to our suburban and farming communities. The suggestion of maintaining a separate state board for utilities not coming within the purview of local boards is open to the objection that it would entail a needless expense upon the state for the experts and skilled assistance, for the state board would be needed as much for half of the utilities as for the whole of them.

One of the most prevalent of the objections to state control is that the centralization of control over local utilities in the hands of the state represents a dangerous, undemocratic tendency, that would tend to rob the people of the power which they should exercise. This is primarily a question of political science. What is the

state and what is the relation of the city to it? It is unnecessary to go into that question at length. The supreme court of the United States and the highest courts of all the states have repeatedly asserted the paramount authority of the state over all of the units which go to make it up. The city, in the language of the United States supreme court in one case, is the creature of the state given certain powers by the state for the purpose of aiding the state in its supreme work of administering government. In exercising control over local utilities the state is not stretching its power, nor assuming anything not inherent in its very nature.

Does the placing of authority over local utilities in the hands of a state commission deprive the people of any power which they should exercise? This might be answered by asking who they are that elect the members of the legislature. This body represents the active power of the state. The power to regulate public service corporations has always rested in sovereignty. In this country the state is the sovereign power. Whatever authority over public service corporations may be exercised by a common council, or a village or town board would be derived directly from the state through the legislature. Will anyone claim that the election of a member of the common council or of a village or town board is a matter closer to the people than the election of a member of the legislature?

We think and speak of the state as a power separate and remote from the people. But the people are the state. If the representatives of the people in the legislature make mistakes or disregard the desires of their constituents, it is the people themselves, not some abstract power, that must and will correct the error.

It is not even good ground for an academic controversy to hold that the exercise by the state of any necessary power acts to deprive the people who form the state of their power. The real question as disclosed in this is not whether in either form of the expression of governmental authority the people may be deprived of a measure of their power to determine their own political destiny, but rather it is this: Is a common council or a village or town board with its multifarious duties more responsive to the demands of its own community for the remedy of evils which are inseparable from the operation of public utilities, than a state commission, created for the express purpose of correcting those evils, sitting all the time, and being equipped with the means of ascertaining and determining accurately the nature and extent of the evils?

The proposition that local authorities are any more responsive to the demands of the people than are the state authorities, is difficult to maintain. In the final analysis the people control legislatures, common councils, and boards, and the promptness of the response in either case to their complaints is measured by the force of the demand for a remedy.

Instead of being undemocratic, state regulation is quite the contrary. Its regulation of local utilities in Wisconsin brings the power closer to the people, more available for every citizen, than it could be under any other system. Under local regulation, if a citizen feels that he is being dealt with unjustly, he may take his grievance to the local board or council. If he is able himself or through attorney to present the matter convincingly, an order may be issued. The utility, however, may refuse to obey the order. Who, then, is to carry the matter up to the courts for final adjudication? The complaining citizen cannot afford to do so at his own expense, and the city is not obliged to do it. Under state regulation as at present administered, each complaint is looked into without expense to the complainant except the small share he may pay in taxes to maintain the commission. If it is well founded, the utility is ordered to remedy the trouble, and if it fails to do so the commission and not the private citizen takes the matter up to the courts for final adjudication.

It is frequently claimed that it is a reflection upon the intelligence of local communities to assume that a state commission is better able to regulate their utilities than they are themselves. This is in fact no more of a reflection upon localities than to require doctors, lawyers and dentists whom they employ locally to have specific authority to practice their professions. There are many functions which affect the convenience and welfare of local communities that the state can perform more economically and efficiently than the communities themselves, and this being true, it is in no way a reflection upon the local communities.

It is often said that state commissions in their desire to be fair to the utilities are more liberal than local authorities would be in the valuations they place upon their property and in the returns they allow thereon for interest and profits.

These statements, however, do not seem to be supported either by facts or by other evidence. No efforts, for instance, appear to

have been made to determine whether higher than fair prices have been allowed for any of the elements that enter into the valuation, or whether the valuations include elements which do not properly belong therein. Nor have they brought out anything that even tends to indicate that the valuations and the returns for interest and profits that are allowed are greater than the amounts for which the necessary capital and the enterpriser can, in the long run, be had; or that shows that the returns thus allowed are higher than the returns obtained by these factors in other enterprises where the risks and other conditions are similar. These matters are apparently not important enough for consideration. In this connection it may be said that in the public utility field, the same as in other industries, it is in the long run necessary to allow such valuations and returns for interest and profits as will bring the necessary capital and enterprisers into the field; and that the amounts that must thus be allowed for these purposes are about the same as the amounts that are allowed in other undertakings where conditions are similar.

While, in the absence of regulation, public utilities have a certain amount of monopoly control over their service and rates, they also resemble ordinary competitive enterprises in this that they have to buy everything that enters into the cost of their plants, and everything that enters into the cost of the service in the open market and pay the market prices therefor. That is, the utilities, the same as other enterprises, must obtain their factors of production, or the land, labor, capital and enterpriser they need, in the general market and at prevailing rates or prices. In constructing or extending their plants these utilities must pay the market prices on every element that is included in the cost of the plant. In producing and furnishing the service they render, they must also pay the prevailing prices on every item that becomes a part of the cost of the service, including interest and profits. The prices thus paid by the utilities are fixed by forces over which neither the utilities nor the state have much if any control. All that can be fairly required of the utilities in this connection is that they do not pay more than they have to pay for any item, and that in making these expenditures they exercise ordinary judgment and foresight in other respects. The cost to the utilities of the service under these circumstances also becomes the cost of this service to the public.

The Wisconsin commission is constantly investigating the cost

of material, labor and other services, the cost at which the capital and the enterpriser can be had, and the operating expenses that are involved in furnishing the service. In appraising the plants it spares no efforts in obtaining the original cost of the plant and its business, the cost of the property in actual use at the time of the appraisal, and the cost of reproducing this property and of the business. Its inventories of the property are as a rule as complete as any that can be made. Its price lists cover not only the cash and credit prices of the articles involved both at the factory and at various points in the country. Its statistics of wages and salaries of the various classes of labor and professional services that are needed are regarded by those who are familiar with them as exceptionally complete. For the purpose of determining the depreciation that has taken place in the property it obtains full data of the age, upkeep, and condition of all the depreciable property. It audits the earnings and operating expenses of the plant from its beginning and determines what the reasonable cost of operation is under the circumstances. It also studies local conditions, the plans of the construction, the methods of operation and all other features that will throw light on whether ordinary judgment has been exercised in planning, constructing and operating the plant and whether it has been and now is furnishing service under normal conditions. It is upon facts of this character that our valuations are computed. With data as complete as this; with honest and competent men to make the computations is it likely that the results obtained are far out of the way?

With respect to the cost of obtaining capital these investigations also show that during the past year the net receipts to the utilities on more than forty bond issues were of such an amount as to bring the annual cost of the capital thus obtained up to something above 6 per cent. The bonds in these cases bear interest at the rates of 5 and 6 per cent. The discounts at which the bonds were taken ranged from 3 to 15 per cent. The selling expense varied from about 2 to about 6 per cent. In no case did the bonds exceed 80 per cent of the value of the plant and the business as determined by the commission, and was in most instances less than this. In all cases the net earnings of the plants, or the balance left for interest and profits after the operating expense, depreciation and taxes had been provided for, amounted to at least twice as much as the interest

charges on the bonds outstanding. If the bonds of these utilities had been less well secured, that is, if they had covered a greater proportion of the value of the plant than they did, and if the net earnings had been poorer, they would unquestionably have sold at still lower prices than those at which they were selling, and the cost to the utilities of the capital obtained would have been still greater. Those bond issues represent small as well as large plants, and cover conditions that may be regarded as normal.

If bonds that cover only about three-fourths of the value of the plant and the business and which are also protected by net earnings that regularly amount to about twice as much as the interest charges on the bonds, cannot be sold at prices under which the net cost of the capital obtained is less than 6 per cent, then it is also certain that the remaining fourth of the capital needed, which is much less well secured, will cost the company much more than 6 per cent. That this is the case has also been repeatedly established, not only by investigations of the commission but from the income accounts, financial statements and market prices of the securities of most enterprises for which these facts are available. The stock that comes on top of bond issues which bond issues cover say fully three-fourths of the value of the property involved, have not, at least for the smaller utilities, during the past few years, been selling in the open market on as low as a 6 per cent basis except in cases where the net earnings applicable as dividends have on the whole amounted to twice as much as this rate, and except further where such stock was also favored by substantial extra dividends from time to time. This has even been true for companies the par value of whose bonds and stocks have not materially exceeded the fair value of the plant and the business.

When the commission allows 7 per cent to 7.5 per cent for interest and profit on what it has found to be the fair value of the plant and the business, it does so because investigation has disclosed that all the capital and the enterpriser that are needed cannot be had on better terms, and that this is the ruling rate for interest and profits under similar conditions. This rate of return on the entire fair value amounts to 6 per cent on the bonds and about twice as much on the stock, when the former represents about 75 per cent and the latter about 25 per cent of such valuation.

It is among the main functions of the commission to determine

the fair or normal cost-value of the plant and the business and the fair or normal cost and price of the service, including the elements of cost which represent reasonable returns for interest and profit. It is further one of the functions of the commission to so distribute the total cost of the service among the customers of the utilities that each branch of this service and each customer therein are made to bear their just share of this cost. From the experience we have so far had in these matters it can be said that in determining the value and the rates there is fully as much danger that the commission will go below the level at which the capital and the enterpriser can be had as it is that it will allow more for these purposes than is reasonable and necessary under the circumstances.

The Wisconsin commission has had several rather sharp reminders of the workings of the economic laws in the public utility field. Thus we have had to pass upon many cases, where because the rates charged by the utility for their services happened to yield lower returns than were necessary to cover the cost of the factors of production, including the market rates for interest and profits, it was utterly impossible for the utilities to obtain new capital for much needed additions to their plants and to their service. The situation was in fact such that the public either had to pay higher rates or go without much needed service. When the commission in some of these cases found that public interests required that the rates be raised just enough to cover the cost of the service and thus enable the utilities to obtain the additional capital that was so much needed for extensions of the plant and the service, it was most bitterly and intemperately assailed not only by the local press but by others. Similar criticisms have also been heaped upon the commission in many cases when in the public interest it has declined to reduce the rates below the cost of the service and below the level at which additional capital could be had. There are apparently many who fail to realize the fact that the utilities have to pay the market prices for the factors of production and that the commission by attempting to reduce the rates for the service to so low a point that the returns therefrom will not cover such costs or prices are certain in the end to do the public much more harm than good.

A large proportion of the complaints against state commissions lacks the evidence of good faith. They frequently appear to be made for some ulterior purpose. In many cases before the com-

missions the experts for the utility claim and endeavor to sustain a valuation that is excessive, while the experts representing the municipality endeavor to sustain a valuation that is much too low. When the commission carefully examines the claims of both sides and also makes a complete valuation of its own, and finally finds that the fair value is lower than that claimed by the plant and higher than that claimed by the city, both sides are disappointed and often roundly abuse the commission. The situation is similar when it comes to the rates of return for interest and profit on the valuation so found. The experts for the utility will claim as much as 10 per cent to 15 per cent while those who appear for the municipality will hold that 4 per cent or 5 per cent is enough for these purposes. The commission may find that the necessary capital and the enterpriser cannot be had for less than say 7 per cent and allow this amount. Again there is either affected or real disappointment and criticism. Both sides appear to think that in order to get a favorable verdict it is necessary to adhere to the old practice before the courts of making extreme claims. The criticism of the commissions in these cases, especially when it comes from the side of the municipality, is often widely published. It is also often accepted by many at its face value without the slightest investigation into the merits of the situation.

The principles and facts which govern valuations and the rates of return thereon do not change with changes in the system of regulation. Assuming ordinary honesty in the matter, is it not reasonable to assume that that body will arrive at the fairest results which has the broadest powers, the widest jurisdiction, the best equipment and the greatest fund of stored-up facts to draw on? The work of the Wisconsin commission in these matters has stood the tests of the courts as well as some of the most severe tests in other respects that can be applied to work of this kind. In the majority of cases the utilities cannot even secure either temporary or permanent injunctions against its ruling pending the outcome in court. Can this much be said of the work of others which is often pointed to as exemplary?

I have often compared as well as I could the valuations made by state commissions with the valuations made by juries and boards which were specially appointed to value specific properties and in every instance I have found the valuations made by state commis-

sions to be the lower. One reason why state valuations are the lower is probably found in this that state commissions have as a rule much more complete data concerning the various elements that enter into the value than it is possible for temporary boards and juries to obtain and that for this reason those elements which are unknown or in doubt and for which values are as a rule arbitrarily fixed are greatly reduced in number.

If those who now object to or find fault with the laws in question and their administration, instead of attempting to sustain some theory or support some propaganda, would fully and fairly examine the rulings under these laws and the result of their operations, and compare these rulings and results with the needs and purpose of the utility service and the cost of obtaining the necessary capital and enterpriser, together with the other factors of production, and if in addition to this they would also fairly compare the conditions generally today with respect to service, rates and other matters with the conditions that existed previously to the time these laws were enacted, it is very certain that they would have wholly different stories to tell.

One of the elements of fair value which has been generally allowed by state commissions but which it is claimed would be disallowed under local control is the element of "going value." The question whether there is or is not a going value depends upon other considerations than the system of control which happens to be in vogue. Briefly stated, going value depends upon the following facts:

A mere physical plant, no matter how perfect or how well it is adapted to the purpose for which it is intended, amounts to but little unless it has or can obtain a paying business. Without business it is a dead mass instead of a living concern earning profits. To have profits it must have business or customers who avail themselves of the services it renders at rates that yield an adequate income. But now plants are seldom paying at the start. Several years are usually required before they obtain a sufficient amount of business or earnings to cover operating expenses, including depreciation and a reasonable rate of interest upon the investment. The amount by which the earnings fail to meet these requirements may thus be regarded as deficits from operation. These deficits constitute the cost of building up the business of the plant. They are as much a part of the cost of building up the business as loss of interest during the construction of the plant is a part of the cost of its construction. They are taken into account by those who enter upon such undertakings, and if they cannot be recovered in some way, the plant fails

by that much to yield reasonable returns upon the amount that has been expended upon it and its business. Such deficits may be covered either by being regarded as a part of the investment and included in the capital upon which interest is allowed, or they may be carried until they can be written off when the earnings have so grown as to leave a surplus above a reasonable return on the investment that is large enough to permit it Whether they should go into the capital account, or whether they should be written off, as indicated, are questions that largely depend on the circumstances in each particular case.

It is, of course, a fact that if the rates could be fixed, as in rare instances they actually have been, at a sufficiently high point in the beginning to cover all legitimate expenses, including a reasonable return on the investment, the deficits might be greatly reduced and the cost of developing the business almost wiped out. Generally speaking, however, such rates seem to be wholly out of the question. Until a sufficient number of consumers have been obtained, such rates would necessarily be too high. Instead of increasing the earnings they would be likely to decrease them. There are even cases where such rates might be entirely prohibitive and result in no earnings whatsoever.

Hence we find that it is the almost universal experience of plants to show deficits below what are reasonable earnings for at least some of the early years. The plants do, of course, try to overcome these deficits both by continuing the low rates at the start and by direct expenditures to develop new business. Since public service enterprises are in a measure businesses of increasing returns, it is in line with good business principles that such methods be adopted. In the face of this situation which cannot be successfully denied to exist, should a public regulating body, charged with the responsibility of adjusting the relations between investors and consumers upon legal and equitable bases, deliberately disregard this condition? It is submitted that this cannot be done and still enable the regulating body to square itself with existing law and sound economics.

This, in brief, explains the position of the Wisconsin commission on "going value." Nor has it ever departed from this position in any of its decisions. Whatever else may in some quarters have been assumed to have been included in "going value" is a pure assumption and has no foundation in fact. To be sure, it has at times varied the methods according to which going value is ap-

praised, but the principle upon which such appraisal rested has never varied.

Another objection which is often raised against state regulation is that it tends to prevent the amortization of investment. Those who raise these objections often speak of amortization as something that is always practicable, as something that is within reach of all communities at all times. They apparently overlook the fact that if a plant is to be amortized it must be through charges upon the customers over and above the charges which are necessary to cover operating expenses including depreciation and returns on the investment, and that they therefore may be burdensome to the customers and even contrary to public policy.

The real significance of amortization charges becomes apparent when they are reduced to the cost per unit of the service and included in the monthly bill to the customer. For five typical electric lighting and power plants serving cities ranging in population from about 3,000 to about 380,000, the annual charges necessary for amortizing the cost of the plants in twenty years on a 4 per cent sinking fund basis amounted to from 1.33 cents to over 2 cents per kilowatt hour for the ordinary short hour lighting users and from 0.5 to about 1 cent per kilowatt hour for the ordinary eight hour per day power user.

For a typical gas plant serving a city with something over 25,000 inhabitants, the effect of amortizing the cost of the plant in twenty years on a 4 per cent sinking fund basis, under the ordinary demand form of rate schedule, would be an increase of about 20 cents for each 1,000 cubic feet of gas used to those who use about 2,000 cubic feet per month.

It is hardly necessary to say that these increases in the rates because of the amortization charges are great enough to be burdensome to the ordinary user, and to prevent the proper development of the service or saturation of the territory. They would therefore prevent many from availing themselves of the conveniences which such services offer and which it is their real purpose to furnish. They would make the existing generation bear very high charges which it cannot afford to bear in order that succeeding generations may enjoy these facilities at very low rates. The effect of this is all the greater since the amortization charges would have to be borne while the communities were smaller and the cost per unit of service

comparatively high. For we all know that the cost per unit of utility service tends to decrease with increase in population or the number of consumers.

Under the ordinary term franchise, however, whether its life is long or short, it is as a rule necessary to either keep the rates high enough to cover such amortization or to agree to renew the franchise when it expires. This has led to much confusion and many disadvantages to the public. It was largely in order to protect the public from such disadvantages that Wisconsin has amended such franchises by substituting therefor the so-called indeterminate franchise. While under the indeterminate franchise it is not necessary to burden the service by amortization and other charges of this kind, the commission has frequently endeavored, for one reason or another, to put such charges into effect. In practically every case, however, the opposition to such charges has been so great that efforts to put them into effect have had to be abandoned. The plants object to them because they will make the rates so high as to prevent them from properly developing their business. The public objects to them because they will make their rates burdensome. Under such circumstances as these, it is manifestly out of the question to institute any system under which the cost of the utilities can be generally amortized.

State regulation is also objected to because it is said to tend to prevent cities from entering into competition with existing plants. If this objection means to convey the impression that state regulation, especially that operating through the indeterminate permit, tends to prevent municipal ownership, the objection is not well founded. Under the indeterminate permit the methods by which utilities may be taken over by the municipality have been very much simplified. Under its provisions several utilities, especially water works, have been taken over. Whether utilities shall be municipally owned is dependent much more upon the attitude of the public, the financial burden of the city, the character of the management of the private utility, the general effectiveness and promptness of the system of regulation, than upon the machinery provided for acquiring the property.

State regulation, however, in a way does seek to prevent ruinous competition either between private plants or private and municipal plants. To the thoughtful student of utility problems this policy,

instead of representing one of the weaknesses, is one of the strengths of state regulation. The Wisconsin commission, in passing upon applications for certificates of convenience and necessity, has repeatedly investigated the effect upon the existing utility and its customers, and upon the municipality of dividing up the field between a municipal and private plant. Almost invariably a division of the business would mean a decrease in the net earnings of the existing plant, and an increase in the cost per unit of service to its customers. It was found, too, that the cost at which the competing plant would be rendering the service was very much in excess of what the same service was costing the existing plant. The facts in one typical case were these: To have erected a municipal plant for the purpose of lighting streets and public buildings would have lowered the earnings of the existing plant by double the amount at which it would have lowered its expenses. The cost to the city of its street and public lighting would have been increased 15 per cent. The cost per kilowatt hour to the private customers of the existing plant would have been increased about 20 per cent. This increase in the cost would have made rates so high as to have retarded any proper development of the business for both the private and the municipal plant. It was even doubtful whether the existing plant would have been able to hold all the business which it then had. In the absence of inefficiency on the part of the existing plant, it has not often been deemed wise economically or in line with public policy to permit competition which would thus increase cost and retard development.

The regulation of necessary service furnished by capital privately owned is so delicate a matter that it should be exercised with the greatest of care. No steps should be taken in this work, the justice and effect of which have not been clearly established. Everything should be done to prevent errors and mistakes whether of judgment or otherwise, because the consequences of such errors are costly, and have to be borne by the public. When the service is inadequate and the rates too high, the public has to bear the inconvenience and to foot the bill. Standards of service that are too high and rates for the same that are unreasonably low are certain to keep capital and business ability away from the public utility, and the public will then have to suffer from lack of service or necessary extensions thereto. Those who have had actual experience in all phases of this work know only too well that it is about as easy to

go too far in one of these directions as in the other, and that excess in either case is contrary to public policy. In addition to this, the work involved in regulation is complicated, and unless carried on on a large scale, relatively very costly. It is for reasons of this kind that it appears to many that proper regulation is as yet out of reach to all but the larger cities unless it is performed by the state or on some other coöperative basis.

THE DISTRIBUTION OF FUNCTIONS BETWEEN LOCAL AND STATE REGULATION

BY MILO R. MALTBY,

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The proper scope of local and state regulation of municipal utilities cannot be stated in a few generalizations. All will doubtless agree that as long as public utilities are operated by private corporations, there must be some form of public regulation and control; that local authorities should administer their own affairs; and that the state has broad police powers which cannot be taken from it. But an exact delimitation of the precise functions which should be exercised by private corporations, by local authorities and by the state is not so easily stated.

Every attempt at a practical solution of this problem must recognize certain facts. First, every generation is apt to have its own ideas of the scope and distribution of governmental powers. In certain directions, the state has never been more socialistic than it is today. In others, the individual has greater freedom than he has ever before enjoyed.

Second, economic and social conditions are shifting constantly. The luxuries of today are the necessities of tomorrow. The complexity of modern life has created a dependence upon community action or coöperation in some form which the political theories of the past were not obliged to recognize.

Third, there has been a steady expansion of the field of operation of a single utility. When the town or city was not so populous but that a single spring or well would supply the entire population, the apportionment of functions between city and state was comparatively simple. But with electric lines encircling several counties, with water supplies brought from long distances to supply our large cities, with natural gas mains extending from one end of the state to the other, and with railroads and telephone systems covering several states, the problem assumes a complexity never before realized. This is not a temporary condition, but one which will continue and increase in importance as decade succeeds decade, and the enlargement of the local political sub-division will probably

not keep pace with this development unless the state is made the unit of regulation, particularly in the smaller states of the east.

Fourth, effective regulation of large utilities is difficult and expensive. The town or village or even the county is not ordinarily able to cope with a large corporation operating in several counties. The maintenance of a proper engineering, statistical and accounting staff in each small subdivision would impose a burden too heavy to be borne. The duplication of effort and the conflict of coordinate authorities would cause waste, inefficiency and ineffective regulation.

Over-estimating the importance of these facts, there are those who urge that all control over public service corporations be transferred from local authorities to a state board, that even our great cities which have a larger population than some states be ousted from all supervision over their utilities, and that even the franchise granting function be taken from them. Between this extreme and complete local regulation, there is a middle ground, for certain functions can more effectively be exercised by a state board and others more wisely administered by local authorities. An examination of the more important functions of governmental regulation will indicate where the line should be drawn.

Incorporation and Franchises

The formation of the corporation itself naturally comes first. This is properly a state function. The state confers powers which no individual possesses, and the methods and conditions under which private corporations may be formed and these unusual powers exercised should be fixed by the state and not by municipal or other local authorities. Before a public utility corporation may operate, however, it is generally necessary to secure additional rights. The right to exist as a corporate entity does not ordinarily include the right to use the streets and public highways. A special franchise must be obtained before operations are begun, and it is suggested in certain quarters that this franchise should be granted by a state board which should determine not only whether a franchise should be granted but also the terms and conditions of such franchise.¹

¹ The bill recently prepared by a council of the National Civic Federation for the regulation of public utilities permits any private corporation now operating a public utility to obtain a *new* franchise without the consent

This policy, in my opinion, is entirely wrong. Would it not be as unjust and improper for a state board to fix the terms and conditions upon which a private corporation should use city property without municipal consent as it would be for a municipality to use private property without the consent of the owner? Is it proper that a state board sitting at Harrisburg should determine whether a street railway should be operated in Broad Street, Philadelphia? Would the citizens of New York permit a state board at Albany to decide that a street car line may be operated on Riverside Drive or Fifth Avenue and terms upon which the grant may be made? The citizens of Chicago a few years ago threatened to suspend certain officials from the lamp-posts for less flagrant violations of the principle of home rule.

Why should state authorities be given such power? It is suggested by those who are so anxious to escape from dealing with local authorities that city councils are corrupt, that political considerations often interfere with justice and that corporations have been forced to accept harsh and unfair terms. They assert that a state commission is not so easily influenced by local sentiment and public opinion, and that it is more likely to do justice.

Have the public service commissions a monopoly of the honesty, virtue and wisdom in every state? Are state boards so familiar with the needs of every community and so wise in dispensing the proper remedy that they should be substituted for local authorities? Is there virtue to be found in Harrisburg and Albany but not in Philadelphia or New York? The whole idea smacks of bureaucratic centralization, of foreign political theories and of the destruction of home rule. Further, many municipalities have had experience with this plan in one form or another. Some of the worst chapters in the history of public utilities relate to the granting of rights to use city streets by state authorities. If municipal authorities have been corrupt and if the power to grant or withhold franchises has been abused, the remedy is not state centralization but reform of local conditions, and we have progressed too far in this direction to take a backward step.

of the municipality or the abutting property owners. All it has to do, is to file a document, and *ipso facto*, it gets a new franchise of general application. Such a provision is in many states unconstitutional.

Control of Securities

Control over the issuance of securities by public service corporations should be lodged in the state and not in the local authorities. Whether such control be restricted to the enactment of laws specifying in general terms how securities shall be issued and the various steps which must be taken prior to their issuance, or extended to include full publicity regarding all financial matters or capped with a comprehensive plan for administrative regulation, the plan should be state-wide and not subject to local variations. One needs only to consider momentarily what would happen if a corporation could issue securities only after approval by every local authority in whose territory it was operating had been secured. In exceptional instances, local control might work without difficulty, but ordinarily there would be such conflict and confusion that it would prove impracticable.

As the corporation is chartered by the state and as it must act as a unit, and as securities are issued not by an entity having a local situs but having a state-wide existence, it is obvious that from a logical and from a practical point of view the regulation of securities is a function belonging to a central authority whether exercised by state legislature or by an administrative board.

Accounts and Reports

Supervision of accounts and the filing of reports are also matters which should be under state supervision for similar reasons. Confusion and conflict would result from local regulation, and there would probably be such differences in the system of accounts adopted by the numerous local authorities that comparison would be extremely difficult and the use of accounting and statistical data greatly hindered.

In several states municipal utilities are subject to state supervision in respect to accounting and statistical matters, similar systems being established for local authorities and private corporations. Objections have been made to this plan, but I see no reason why municipalities should not ordinarily be required to have uniform systems of accounts and records, so that the facts may be known to the citizens and comparisons made.

Rate Regulation

The power to review rates and to determine what charges shall be made is the function which has attracted most attention. The sovereign power of the state in this respect has long been recognized. The question with which we are now concerned is whether this power should be lodged with local or with state authorities. Admittedly, the regulation of railroad rates cannot wisely be entrusted to local authorities. The state is certainly the smallest unit which should exercise this function, and it has been found necessary to confer certain powers upon a federal board to secure adequate supervision of interstate commerce. As this discussion relates to municipal utilities, railroads are excluded, but there is considerable similarity between railroad rates and street railway and interurban rates. These utilities often extend through several jurisdictions, and similar difficulties attach to local regulation of their rates as attach to state regulation of railroad rates. Gas works are more frequently confined to single areas. Hence, while it is not impossible for municipalities to regulate rates and while there have been many instances where this power has been wisely and efficiently exercised by municipalities, it will be found increasingly difficult; and if it is not now, it will ultimately be necessary in most instances for the state authority to control rate regulation. In the meantime, where utilities are purely local, where cities are regulating rates effectively, and while state commissions are perfecting their methods and organization, it is not advisable to deprive all localities and particularly the large cities of all control over rates. It is impossible, however, for small localities to perform efficiently this function. Rate regulation involves considerable expense and the maintenance of a staff of experts to investigate and report the essential engineering, statistical and accounting data necessary to a fair solution of the problem. Small cities, towns and villages do not have the necessary organization, and the expense of maintenance is so great as to make it almost prohibitive. States and large cities can bear the expense without an undue burden upon the public.

Control of Municipal Rates

There are extremists who advocate that state commissions should be given power to determine what rates should be charged by municipalities operating their own utilities and what principles should be followed in municipal rate-making. This is another radical infringement of the home rule principle and would virtually prevent a municipality from dealing with its utilities upon a public health or common good basis and require them to raise funds as prescribed by a state board. To illustrate: It has not been many years since private companies maintained sewerage systems in southern cities. From time to time these systems have been acquired by municipalities, and instead of charging according to the service rendered, the cost of maintenance has been included in the annual budget and raised by general taxation. If state regulation of all municipal utilities is to be carried as far as suggested, it will mean that municipalities may not defray such expenses by general taxation, by assessments upon property benefited or in some other way as they desire, but that revenues must be raised as a state commission shall dictate.

Many municipalities raise a considerable part of the cost of operating water works by general taxation, upon the ground that an adequate water supply is necessary to protect the health of the city. If the extreme of state regulation were to be adopted, a state board could rule that this is improper and that those using water must pay according to the number of faucets or bathtubs or gallons of water used. The people of the community might prefer another method, but their wishes would avail them nothing. Municipal home rule would become a myth, and towns, villages and cities would be ruled from the state capital and by persons not directly responsible to the people affected. Few things would be more destructive of civic patriotism and good government.

Service Matters

The term "service" has a very broad meaning. It covers a multitude of matters ranging from the number of cars operated upon a street railway to the efficiency of lamps supplied by electric companies and the pressure under which gas is distributed. These functions affect not only the commercial status of a community but also its health, convenience and safety. Until recently municipi-

pal regulation had a much wider scope than state supervision, but since the creation of state commissions with powers over service matters, there has been considerable discussion as to where the municipality should end and the state begin. As yet no clear line of demarcation has been evolved. Probably the most practicable plan would be for local authorities to continue to exercise the control now vested in them by statutes and city charters, and in case of conflict between different local regulations or between local and state regulations for the action of the state regulatory body to be controlling. In this field, state commissions should proceed slowly, and they should not interfere with local regulations unless such interference is quite necessary. Doubtless, experience will indicate what matters are local and what matters can best be dealt with by a state board. Until this has been done, state commissions should give local authorities every chance to work out their own salvation.

THE CASE FOR HOME RULE

BY CHARLES E. MERRIAM,

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The city of Chicago was the victim in 1913 of as daring a raid as a pirate crew ever made upon a rich and defenseless city. A bill was pending in the legislature which created a public utility commission, but in article six conferred upon cities the option of exercising identical powers, if they chose to undertake the task of regulation. This home rule article was suddenly stricken out by the house. Upon public protest it was restored by the senate. On the last day of the session the house refused to concur in the senate amendment, and to the consternation of Chicago the act became a law. It swept away most of the powers Chicago had slowly wrung from the state legislature through a long series of efforts, and snatched away the hope of adding others. This act was not demanded by the state of Illinois. No party and no candidate urged it. The Chicago press, and people, had uttered the most vigorous protest against the measure. Unasked by the people of the state and denounced by the people of the city, this bill was passed in the interest of public utility corporations, and was the crowning climax of the corporation legislation of our state.

Those interested in local public utility regulation firmly believe that cities should possess the right to control public service corporations, which are primarily, and largely, local. We hold that cities should be given the option of local or state regulation to exercise, as their situation, or judgment, may dictate. If cities prefer state regulation it should be their privilege to come under such regulation; but if they prefer to regulate their affairs themselves, then they should be accorded that privilege.

There is nothing to prevent cities of moderate size from securing the best types of expert advice, and assistance, whether engineering, accounting, investigating or otherwise. Chicago has had the benefit of the advice of men like Arnold, Cooley, and DuPont in the consideration of its traction problem; of Wallace and Fisher on railway terminals; of the Jackson brothers, and Bemis on gas and telephone,

and in the last ten years, has attacked the public utility problem, with the assistance of competent experts. The ability of the experts employed and the advantages gained have stood in striking contrast to the work done by the railway and warehouse commission of the state.

We have now organized a public service department for the supervision of service and the regulation of rates of public utility companies. This department consists of five bureaus: The bureau of transportation, the bureau of gas, the bureau of telephone, the bureau of electric light and power, and the bureau of engineering.

But for the surprising action of the legislature of 1913, this department would have now been in position to deal directly and effectively with the utility companies of Chicago. As things stand, its functions are limited to the general supervision of public utility service, and the enforcement of certain provisions in contract ordinances, notably those contained in the telephone and electric lighting company franchises.

Chicago received from its public utilities, in 1913, the sum of \$3,688,477.03, derived as follows:

Street Railway Companies.....	\$2,529,033.81
Chicago Telephone Company.....	385,614.93
Chicago Tunnel Company Telephone.....	11,880.36
Chicago Tunnel Company Tunnel.....	29,716.28
Commonwealth Edison Company.....	473,010.95
Cosmopolitan Electric Company.....	21,665.29
Northwestern Elevated.....	10,168.46
Union Loop (elevated).....	85,085.71
Elevated car licenses.....	69,100.00
Telegraph companies.....	13,929.90
Miscellaneous sources.....	59,271.34

If adequate power were conferred upon the city by the legislature, it would be possible to have in Chicago a well equipped staff of experts, supervising service and rates, but responsible to the community which these companies serve, and not to a large and composite state population, most of whom they do not serve. The capitalization of the public utilities of Chicago excluding railroads is in round numbers \$525,000,000. This amount is made up as follows:

Capitalization Public Utilities Companies

Name of company	Stocks	Bonds	Totals
Chicago Utilities Company.....	\$49,269,000	\$9,999,900	\$59,288,900
Chicago Telephone Company.....	27,000,000	19,004,000	46,004,000
Commonwealth Edison Company.....	45,838,936	32,000,000	77,838,936
People's Gas Light and Coke Company.....	38,500,000	46,762,000	85,262,000
Chicago Railways Company.....	100,000	87,481,465	87,581,465
Chicago City Railway Company.....	18,000,000	28,950,000	46,950,000
Calumet and South Chicago Ry. Co. . .	10,000,000	4,825,000	14,825,000
Chicago and Western Railway Co.....	72,000	74,000	146,000
Chicago and Interurban Traction.....	1,000	1,350,000	2,350,000
Chicago and Oak Park Elevated.....	10,000,000	5,077,062	15,077,062
South Side Elevated Railway Co.....	10,231,400	10,327,000	20,558,400
N. W. Elevated Railway Company....	9,891,500	29,552,000	39,443,500
Met. Elevated Railway Company.....	16,172,000	15,498,000	31,670,000
Total.....			\$527,975,263

The capitalization of down-state utilities, excluding railroads, is approximately \$300,000,000.

Of the companies operating in the city, the People's Gas Light and Coke Company is owned by the Commonwealth Company and the elevated railroads are owned by the Commonwealth Edison Company. Interlocking directorates among the other corporations, as shown by recent reports of the public service department upon my city council order, are so close as to keep the ownership of this half billion dollar investment in a very few hands. The process of concentration is proceeding very rapidly and it is only a matter of a short time until we will be faced by a single company controlling all the public utilities of the city. This company will have larger revenues than the city government, a greater debt than the city, employ a larger number of men than the municipality, and transact a volume and variety of business rivalling that of the municipal corporation.

This mass of capital and net of interests can be effectively met only by one power, and that is the combined power of the subscribers of all these companies in the city. These consumers of gas, electricity and users of telephone and street railways, are familiar with the character of service rendered and the prices paid. If they are in a position to assert themselves through the city government they will exert pressure which the people of the whole state cannot

and will not bring to bear. The pressure of these subscribers will be persistent, insistent, and perhaps, at times, annoying to the utility corporations.

If rates and service requirements fixed by the locality are unfair and unreasonable, the courts will overthrow them, and the loser will be the city itself. The real danger is not that of confiscatory rates or arbitrary service orders, against which the corporations are well protected, but that the public will suffer from high prices exacted for inferior service. The real and present menace is the payment of dividends on watered stock, paid by the crowded car; the busy signal; the wrong number; and the unbridled meter. To compel consumers to deal with this huge combination through the devious and indirect agencies of state government will tend to obstruct that vigorous regulation which the public interest requires, and which it should be the object of sound legislation to secure.

The charge has been made that public utility regulation by local authorities is likely to be more "political" in nature than regulation by state authorities. This contention is entirely misleading. There is no ground for supposing that state governments are less political than municipal governments, taking the country over. Indeed, state governments are always organized on partisan lines, while many cities are non-partisan in their organization. As a member of the city council of Chicago, which has been organized for more than a decade on a basis of, at least nominal non-partisanship, I protest against the assumption that the city hall is any more "political" than the partisan state government has been during the same period. If by "politics" is meant the interference of the demagogue, or the blackmailer, with fair and reasonable settlements, I reply that it is an easy march for these persons from the city hall to the state capitol. They mobilize quickly and understand how to besiege a governor as well as a mayor or a city council. It is utterly idle to suppose that merely by placing the power to regulate in the hands of the state government the influences that interfere with wide and just public control will be automatically eliminated, and that on the whole conditions will be one whit improved.

The real reason why many corporations prefer state to local control is, not that one is more "political" than the other, but that the indirect pressure of the state electorate is preferred to the direct pressure of the local electorate. In the confusion of state and national politics they hope to escape, to some extent, public notice

and attention. They calculate that in the excitement of national elections, in the rivalry between city and state, in the battle over the liquor question, in the dust raised by factions and sections, a commission may be secured that either will be controlled or easily influenced by the public utility interests. It is difficult in any state to make the choice of a utilities commission an effective issue in the selection of a governor, and it is precisely for this reason that public utility interests, as a rule, prefer that type of regulation. Upon this point they are certainly "wiser in their day and generation than the children of light." I know that the public service corporations of Chicago will never be as effectively regulated in the public interest by the state, as they will be by the city of Chicago, and I have reason to believe that the same situation is found in many other large cities. In my opinion the cry that "politics" will interfere with adequate municipal regulation is itself one of the cleverest pieces of "politics" in the long history of clever utility corporation tactics.

The urban population of the United States of cities over 30,000, is 29,127,693. The population of cities over 100,000 is 20,886,015. The public utilities in these cities are an integral and inseparable part of the life of the community. If any subject is local in nature, and therefore properly subject to local regulation, these utilities certainly are of this class. A city government shorn of power over its street railways, its gas and electric lighting companies, where these are mainly local, is placed in a position where home rule is impossible. The control of city affairs is automatically transferred to the state capital and the state commission. That public utility questions have so often been the storm center of local interest in cities like Chicago and Cleveland, is not without deep significance. This intense interest shows how far-reaching is the local importance of public utility problems, and how vital the power of local regulation is to the development of local government. The more nearly the area served by the utility corresponds to the city limits, the more emphatic the argument is.

There are those who look with smug satisfaction at the raids upon the economy of our cities, but they will do well to remember that cities deprived of the power to regulate their local utilities may be forced to ownership and operation of them in order to secure the service desired, and denied. In the long run, a generous option to the city of ownership, or regulation, will prove the wisest policy and will result in greater gain to both city and corporation.

STATE AND LOCAL REGULATION IN PENNSYLVANIA

BY IRA W. STRATTON,

Mayor of Reading, Pa.

We are at present passing through an age of social revolution. The general public is demanding better civic conditions, better form of government, better class of men in public office, better returns for the public money and better and more efficient regulation of public utilities.

In response to this general demand our form of government is undergoing a gradual change. Municipal government by commission is supplanting government by the old double barreled councilmanic form. As this form of government of cities has grown very popular, it has been adapted to meet other conditions that have arisen. As a result, in various states we have what is known as the public service commission, public utilities commission, or a commission of synonymous name. The idea of commission government was to centralize and concentrate the duties and power and to fix the responsibility of conducting municipal affairs upon a few men elected at large by the people, whereby more efficient service would be obtained by reason of their being in closer touch with the people on account of the regulations governing and controlling such commissions.

Here in Pennsylvania, today, we have commission government in all the cities of the second and third class; and we also have a state public service commission. I am a firm believer in the principles of commission government when properly regulated, and think that they can well be applied to other functions of our government. But while the aim of commission government is to centralize and concentrate power and authority, the pendulum can be made to swing too far in that direction and the matter over done. That has been the case in Pennsylvania. The powers of the Pennsylvania state public service commission, as they are at present constituted, are too broad and sweeping and too autocratic to be allowed to exist in a free and sovereign state. Quoting from the title of the act, creating and establishing this commission: "and to a limited extent

regulating municipal corporations engaged or about to engage in the business of public service companies," the vastness of its power becomes readily apparent. Municipal corporations have certain natural and constitutional rights that cannot be infringed upon or restricted. Under their corporate powers, cities of the third class in this state are granted certain inherent rights, among which is: "the making of contracts and the doing of all other acts in relation to the property and affairs of the city necessary to the exercise of its corporate and administrative power." To show you that an attempt has been made to infringe upon and restrict the inherent and constitutional rights of municipalities, I will enumerate a few of the powers of the Pennsylvania state public service commission, wherein they conflict with those of a municipality:

The state public service commission must first give its consent before any municipality can acquire, construct or operate its electric light plant, water plant, gas plant, heating plant or any other public utility.

The state public service commission has the right to fix the rates that shall be charged for the service of any public utility operated by a municipality and can also compel it to adopt, use and keep, in conducting its business, such form, method, system or systems of accounts, records and memoranda as the commission shall prescribe.

The state public service commission must first approve contracts between municipalities and public utilities before they can become valid and no grant or franchise of a municipality to a public utility can become operative without the approval of the commission.

The state public service commission has the power to change or abolish any grade crossing within the city without the consent of the municipality, and can assess the entire cost occasioned by such change to the city.

The state public service commission has the power to change the grade of the street occupied by a railway or street railroad and assess the municipality with the cost of said change.

The state public service commission has the exclusive right in saying whether or not a city shall extend any road or street across the tracks of a railway or railroad corporation.

The state public service commission must first grant its consent or its "Certificate of Public Convenience" before many matters of an urgent and local nature can proceed.

The power of the state public service commission in all of the above instances is absolute and the only appeal from any of its rulings is to the court of common pleas of Dauphin County, at Harrisburg, where everybody must go and where the appellant must not only, as a condition precedent, pay all costs of preparing the

record, but must fight for the local rights, the public service company and the public service commission with all their counsel. Furthermore, in case of an appeal no evidence is considered except that which was taken before the commission and the Dauphin County court can only affirm, or reverse, and in the event of reversal, send the case back to the commission for reconsideration.

The Pennsylvania state public service commission, being appointed by the governor, is answerable to no one for its actions. Why, then, should this appointive commission be given the power and authority over the elected representatives of municipalities regarding the exercising of home rights which properly belong to the municipalities themselves? Is it not reasonable to believe that men elected locally by the people are better able to interpret local conditions and the intent of the people than appointed men unacquainted with local surroundings? I wish it to be clearly understood that I have no grievance against the individual members of the public service commission, for I hold each and every one of these men in high regard and have supreme confidence in their character, integrity and honesty of purpose. It is with the principle of this law that I find fault. The vast power and authority conferred by this act upon a few men are a blow to the cardinal and fundamental principles of democratic government. It is the entering wedge to deprive the people of that great principle for which our forefathers fought: the right to govern themselves. Men are but human and not divine and at sometime or other are liable to have their fair judgment prejudiced by sentiment, friendship or other circumstances. The members of the public service commission are not responsible for the act creating that body and they must do their duty and enforce the law as they find it. I do not believe that the commission would intentionally use this vast power at their command to the detriment of the municipalities of our state, but no necessity existed for conferring the same upon them and the act should be very materially modified. With this end in view, the several cities, boroughs and towns of this state have organized "The Municipal Home Rule League of Pennsylvania," having in view the following objects:

First. To effect the amendment or repeal of the public service company law and such other laws or parts of laws as affect the inherent and constitutional rights of municipalities and the people in their self-government.

Second. To frame and cause to be enacted such laws as may be necessary

to restore to the municipalities and the people their inherent and constitutional rights.

Third. To guard constantly the rights of municipalities and the people at large against the encroachment of power by unscrupulous public service corporations or by individuals in the enactment of unjust laws; and in general to protect the people of the great state of Pennsylvania in their civic and economic rights and interests.

You will agree with me, gentlemen, I am sure, that these principles for which this league stands are founded on good common sense and are only those to which the people are justly entitled. This league is now at work gathering data and drawing up laws embodying the principles that it stands for, and which it will attempt to have enacted at the next session of the legislature. I feel confident that the old adage, "Right is might and in the end shall prevail," will again be verified.

Not only is the present public service commission act of this state wrong in the instances just enumerated but it is impossible to carry out its requirements in an efficient manner. The method of procedure that is prescribed and must be followed in all the dealings with the commission is nothing but a mass of red tape that makes delays and inconvenience the rule and not the exception. This is but the natural outcome of the broad scope of the power of the commission. The large amount of work, trivial, detail work, that it is required to pass upon because of this broad power, takes up its time to the exclusion of almost everything else. As a result, with a limited clerical force, there must be long, protracted delays often resulting in great expense and inconvenience until the matter can be reached in the regular routine. I have in mind several instances in which the inconvenience and delay resulting from complying with the requirements and red tape prescribed by such regulation are aptly illustrated.

In one case a municipality decided to install a telephone exchange in its city hall because of the more efficient service that would result therefrom. The officials of the telephone company were called in and the needs and wants of the city explained to them. After some discussion an agreement was reached. Before the matter of installing the telephone exchange could proceed, however, application for a hearing before the public service commission had to be made, a petition for a certificate of public convenience had to be prepared, the substance of the contract, the names of the

contracting parties and date when the commission would be asked to approve the contract had to be advertised in the daily newspapers, and after the hearing the pleasure of the commission awaited until the certificate of public convenience be issued. Until this certificate has received all work must be held in abeyance. This matter has been in suspense before that body for several months and in all likelihood, from present indications, several more months will elapse before the certificate of public convenience is issued and the exchange installed.

In another instance a telephone company owned a pole on which was carried its wires and also the wires of another public service company. Events transpiring which made the ownership of the pole by the telephone company unnecessary, the telephone company decided to sell or give it to the other public service company. The transaction involved at the most a cost of not more than \$10 but it being a matter between two public service companies it was found that it would be necessary to first obtain the sanction of the public service commission, which would then issue its certificate of public convenience, before the matter could proceed. The amount of the expense involved in drawing up the plans showing the location of the pole, the wires thereon, in advertising, and in going to and from Harrisburg to take the matter up with the commission greatly exceeded the amount of money involved in the transaction.

Again, the matter of building a certain railway was being considered and the necessary capital, about \$90,000, had been paid in by the prospective incorporators of the company. Then, as it was first necessary to obtain the approval of the public service commission before the company could be incorporated, the money was placed on deposit in a trust company until said approval would be obtained and the matter of incorporating proceed. The delay occasioned by the method of procedure stated in the above cases held the matter up for several months. Finally, no action being taken, the parties interested became exasperated at the delay, took up their money and invested in some other enterprise and the matter of providing street railway transportation in that section of the country and which would have proven a decided benefit thereto, was dropped.

These are convincing examples of the red tape encountered,

delays and inconvenience met with and benefits lost through the operation of the present law. On the other hand were the public service commission to enforce all present regulation requirements with the object of getting quicker action, it would take an army of clerks, special investigators and the like. The expense that would be entailed would be great and would result in placing an unjust burden upon the people in the form of direct or indirect taxation to meet it, and the results achieved would be of little practical value to anyone.

We need regulation of public utilities but the regulation should be along simple and sane lines. Under the present act, it is provided that before any public utility company can do business in a locality where another public utility is engaged in the same business, application must be made to the public service commission for a certificate of public convenience and that, "the commission shall find or determine that the granting of approval of such application is necessary and proper for the service, accommodation, convenience or safety of the public." Recent interpretations of this provision, by the public service commission, practically assure every public utility company that it is safe from competition, and so long as the law remains in its present state, they need have no fear of competition in the future. Such conditions breed arrogance, rudeness and indifference on the part of the public utility company towards the public, as it has a virtual monopoly on its product in that locality and is not amenable to the local residents for its conduct. To allow such conditions to exist within a state is in direct contravention with the policy of the federal government in its dealings with national monopolies. The federal government, recognizing the fact that competition is vital to the business and prosperity of the country, and that monopoly produces stagnation of trade and commerce, brought suits against the trusts that were exercising monopolies and were successful in dissolving them, thereby giving to trade the stimulus that is always the result of competition. If this is a national policy, why should it not be a state policy? Competition means courtesy, due consideration of the public's needs, and acts as an incentive to produce the very best at the lowest cost and it should be encouraged to the utmost.

The public, being obsessed with the idea that public utilities are the cause of all public ills, has made these companies the subject

of special investigations, special taxes and special laws. Legislating against them has become a fad and like all fads has been carried too far. Within the past ten years this has been especially true. During this time there has been placed on the statute books of this and other states, one after the other huge cumbersome laws, bristling with legal and technical terms and phraseologies. These laws were all designed to regulate the operation of public utilities and the author of each claimed that his law would be the cure-all for all problems arising between the public service companies and the public, solving all such problems in a fair, just and equitable manner. The fallacy of these claims has been proven in every instance. Their legislation was based upon what had occurred in the past and failed to make provisions for the constantly changing conditions and viewpoints, which are continually arising and changing the method of operation of public utilities. Moreover, it is an impossibility to frame a law to allow for these constantly and continually changing viewpoints and conditions. The present laws have signally failed to accomplish the result desired and on the other hand have occasioned a great deal of inconvenience and delay. This is because, among other things, they attempt to pass on the honest acts of all corporations, which are of a goodly number and which the public service companies are perfectly willing that they should pass upon, whereas if the public service company does not wish to have the public service commission pass upon certain of its actions, it simply ignores the commission, and the ferreting out of every such case is practically impossible. In this way the aim and intent of the law prescribing such regulation are frequently frustrated. Regulation of this kind does not regulate.

It is possible to run a furnace without a draft check or regulator but if you desire to get the most efficient results from your furnace and your fuel, you will install a check or regulator. The regulator, however, must not be so cumbersome a thing as to make the running of the furnace an expensive luxury devoid of any economical results. It must be a simple device that will not interfere with the practical running of the furnace. So it is with public utility companies. They could be operated without any regulation whatever but if the public desires to get the most beneficial results from such public service companies, they must be regulated, but the regulation dare not be a cumbersome thing that is going to

interfere with the ready operation of the company or endanger the user's benefits, but must be a simple thing that will not retard or restrict the every day routine of the company or be a burden on the public.

Public utilities are here for a purpose. That purpose is to supply the great wants of the whole people and toward that end they should be operated in the interests of the public welfare. From past experience, we know that the public has not always been fair to the public utility company, nor has the company always been fair to the public. The spirit of retaliation has often been present and on many occasions has been allowed to befuddle and becloud the real issues that were under consideration. This whole question should be considered in a fair-minded way, keeping in mind the viewpoints of both the investor and the public. The investor in the stock of a public utility must remember that the grants and franchises for the use of public property which the company has received from the people are of inestimable value; but he should also be assured that the safety of the enterprise in which he invests is not to be endangered by drastic legislation which would affect the value of his investment; and the whole body of investors, constituting the public service corporation, which is enjoying a municipal grant or franchise, should keep in mind the fact that the public is at all times entitled to receive fair and just treatment at their hands, whether there is a specific law covering the case or not. When the public service company loses sight of this fact and attempts to evade the measure by hiding behind its legal rights, the public becomes aroused and demands redress with the result that laws are often passed which are more severe than there was any necessity for but which bears evidence to that "get-even" spirit that is entirely too prevalent among us. The public in its turn must remember that the public service company also looks to them for just and fair treatment and that while there may be difference of opinion at times, hasty action should be avoided and the matter left to be settled in the light of cold, unbiased reason.

Our laws are made by our representatives, who are elected to represent all the people. They legislate to cover existing conditions according to their knowledge, which is often meagre on such a great question as this one. This is due to a lack of abundant and correct information on the subject and no matter how honest their

intentions may be they are frequently swayed by friendship, politics or the seeming popularity of the measure, which atmosphere is often created by the ever ready one side, and the legislator unthinkingly permits himself to be placed in the position of a medium between the people and the corporation, instead of being the direct representative of the whole people. It is in this way that many errors creep into our laws and they become the cause of much unpleasantness until finally stricken out or corrected by subsequent legislation. This condition could be corrected by having the public throw off that lethargy—indifference—which seems to have enveloped it in regard to public affairs, take a greater interest in the public welfare and keep in closer touch with its representatives. We should always endeavor to elect men of character, integrity and forcefulness who would have the keen foresightedness to discriminate in favor of the right and would not allow themselves to be influenced by anything except their duty to the public.

When the people become awakened to existing conditions, we can then hope for more efficient, more sane and more simple laws. Why, the most striking feature, resulting from laws of regulation of public utilities to which I have referred so repeatedly, outside of its inefficiency, is its frightful cost. I am informed that there was spent by public service commissions of the several states during the past year the amazing sum of \$40,000,000, all of which was paid out of the funds in the public treasuries and which was derived from direct taxation of the people. In addition the people were made to pay indirectly many more millions of dollars by reason of over charges, poor quality of service and in other numerous ways applied by the companies to reimburse themselves for the cost incurred in carrying out the exactions of the commissions. The total cost of this direct and indirect taxation, which must in the end be paid for entirely by the consumer is simply enormous. Do you marvel that the public is awakening and demanding that laws of regulation that do not regulate but only result in great cost, inefficiency, delay and inconvenience, be corrected? I tell you, gentlemen, that the time has come when the people will insist that an entire revision, correction and adaptability of the laws in all their phases be made. As one method of correction in the regulation of public utilities, I would suggest that public service companies be regulated along the capital, rates and service lines.

They should not be allowed to capitalize for a greater amount than that actually invested in the business; their rates of service should be fixed upon a sliding scale basis, and should be established on the cost of the necessary operating expenses plus a fair return on the money invested; their service should be of a standardized, uniform quality, from which they should not be allowed to deviate; their dividends and surplus should not be allowed to be increased without the public participating jointly in the prosperity of the company. This could be done in the following manner: The company should be required to reduce the rate of the standardized, uniform quality of service to the public a certain amount for every per cent added to the dividend or for every stated amount placed to the surplus account. Under this plan, known as the London plan, the company would have no incentive for breaking or evading the laws for the purpose of increasing its dividends, as the only way in which dividends or surplus could be increased would be as previously stated. The desire to earn and pay large dividends has been the cause of more evasion of laws on the part of public service companies and corporations than any other one thing, but under this plan there would be no necessity for their so doing. Instead the company would be kept on the alert to adopt all improved ways by which their product could be furnished at the lowest possible cost, thereby increasing the gains of the company in which both the stockholders and the public would share, thus benefiting both. The public service company would not be harassed by a multiplicity of laws retarding and interfering with its method of operation; the investor in the securities of the company would receive a fair return on his money, with a lessening of the element of risk in connection with his investment; and the public would be saved the huge sums now spent for inefficient regulation besides being assured of a uniform standardized quality of service, the cost of which would be reduced, according to the prosperity of the public utility company.

The day when valuable municipal franchises are to be secured without the city receiving an adequate return therefor is past, as the enormous returns that have accrued to the original investors in the first public utility companies have disillusionized the public as to these persons being actuated by a spirit of public philanthropy. A broader public vision now prevails and the jingling dollars of today can no longer dull the acute hearing of the people to the

host of future possibilities in which the investor and the public should be joint participants.

What is eminently desired by everybody is a plain, common sense situation, devoid of red tape, easy of interpretation, with theory and practise combined in a practical way and everything dovetailing and working together smoothly and harmoniously for the production of the most efficient and beneficial results that are capable of being achieved for the good of the public welfare.

The London plan of which I have just spoken would go a great way to produce this result and I would favor its adoption and trial here.

I am of the firm conviction that the present method of regulation of public utilities in this state will be corrected by the next legislature and the defects existing in the public service commission act repealed.

In an earnest effort to serve in the best and most satisfactory way the public needs, the public utility companies should intensively cultivate that friendly feeling which brings confidence, and then with a mutual recognition of each other's rights and purposes there will appear on the horizon the dawn of a day of better things for all concerned in the public welfare.

CONCLUDING REMARKS OF PRESIDING OFFICER

JOHN PURROY MITCHEL

There were two principles laid down by Mr. Erickson in the very interesting and instructive paper that he has just read to us, which particularly impressed themselves upon me. The first was that the field of the body regulating a public utility should be as broad as the field in which that utility operates; and the second, that a public utility ought to be operated either by a state or local body in accordance with which could do it best. Now, it struck me that if Mr. Erickson were to decide that question in New York according to those two principles, we would find Mr. Erickson on the side of home rule regulation there; first, because most of the utilities as to which we feel the necessity for regulation are coterminus in their field of operation with the greater city, and secondly, because we are devoted in New York to the principle of home rule. We have an abiding faith and conviction that we can govern ourselves a great deal better than anybody else can govern us. And so I was very much interested in hearing Mr. Erickson lay down those two principles.

And now, ladies and gentlemen, the discussion of the evening is closed. You have heard a good deal of sound doctrine. To me, sitting here on the platform, it has seemed that perhaps a preponderance of the opinion expressed here by the speakers lay on the side of a material and effective measure of local regulation; but, fortunately perhaps for your comfort and possibly also for my confidence in my own opinion, you will not be asked to take a vote on that subject this evening. It is hardly to be expected that this important question will be settled as a result of this series of conferences, but that this discussion has been held at a time when this matter is a live issue in the cities as it is in New York, where we are going up to the state convention this year to ask a material and effective measure of genuine and practical home rule, certainly ought to put us further on the way to a logical, reasonable settlement of this question for our cities.

But whether we settle that question or not, it seems to me that there is a practical result that ought to follow from these confer-

ences. As our civic consciousness in the cities is developed, and our understanding of our own problems, we have come to see that those problems are not local or peculiar to particular cities, but are typical and common to all the cities. It was for that reason that in the call issued by Mayor Blankenburg and his colleagues attention was called to the fact that it might be possible in these conferences to develop a common basis of coöperation on the part of the cities in securing fair rates from public service corporations. Now, if out of these conferences there grows a more sympathetic understanding, a better feeling, more effective coöperation, a practical basis for the establishment of the machinery of coöperation by the cities, the same kind of effective and practical coöperation that most of us feel exists today among the public service corporations, then, I say, if that can be accomplished as a result of this series of conferences, the people of our cities can feel that a practical and valuable result has been achieved for them.

MUNICIPAL OWNERSHIP

NEWTON D. BAKER,*

Mayor of Cleveland.

Fellow Mayors and Delegates: I have so much respect for the office of Chairman, a function which is largely confined to the introducing of other persons who are to speak, that I have refrained from preparing an address which I could read, introducing the theme of the discussion this morning.

There are, however, a few reflections, which may not be inappropriate for me to venture to you before calling upon those who are to read papers and participate in the serious discussion.

In the first place I want to point out what I believe to be true, that the movement for municipal ownership in the United States is the direct and immediate fruit of the misconduct of privately owned public utilities. That is not true so largely in Europe, as it is in this country. In Europe the movement for municipalization of city public utilities, and nationalization of state public utilities, has had a somewhat different origin. All of us, I think, will recall that immediately upon the conclusion of the Franco-Prussian war, when Prince Bismarck was thinking of some sort of cement that would hold the new German empire together, the first domestic policy propounded by him was the nationalization of the imperial railroads. He wanted the German government to have control of the largest sum of ready money daily coming in over the counter that there was in the Empire. He wanted to relieve, to some extent, the rate payer who would be burdened by very heavy exactions for national purposes of one sort and another and so without infringing upon the discussions which we will hear from Mr. Howe as to how European municipal ownership was brought about, I think I may venture my own opinion that the movement for municipal ownership in European cities generally was, in part at least, perhaps in larger part inspired by the desire to find sources of municipal revenue which would relieve the general taxpayer, or at least exonerate him for local purposes, and free his shoulders to bear the

* Remarks as Presiding Officer, Session of Saturday Morning, November fourteenth.

burden of national taxation which everybody foresaw would necessarily be serious.

In our own country, we had an entirely different attitude. We had a raw continent to study and exploit here, and we developed a set of men who were exploiters of that continent, who were captains of industry and whose success was not achieved by observance of the Ten Commandments. Their rough work succeeded and was very showy!

We came to have a sort of vulgar worship of success in the United States. Men who were able secured either from the general or state government or through the municipal government the grant of great privileges, out of which they could make great fortunes, and dazzled by their unprecedented riches we looked upon them as the highest development of American initiative. It was at least one instance, although not the only instance in history, in which a people, between the Golden Calf and the Ten Commandments, were led to worship the Golden Calf. We came to a very sudden awakening on that subject. Some ten or twelve years ago, it was considered that the American city was the American failure.

Mr. James Bryce, in his *American Commonwealth* said it was too soon, even yet, to tell whether America's experiment in democratic institutions and self-government would succeed, and that, if it went to pieces at all, it would go to pieces upon the rock of a corruption and degradation of the American city, which showed the incapacity, apparently, of the American people to govern themselves.

While much work has been done by the American city, I doubt whether anybody ever opened so deep a mine or ever performed so great a service for American cities, as was done by Lincoln Steffens in his series of articles on "*The Shame of the Cities.*" He hurt our pride, he stung our self-esteem, he exhibited us at our very worst, he made even the shameless ashamed, and when those articles were read and digested in America, *Pilgrim's Progress* was used to find a new name for the work that Lincoln Steffens started to do, and the muck raker became a familiar figure among us. America, showing her enterprise and her capacity, shook herself together for a new city régime as an answer to the challenge.

The instant result of inquiry was that all sincere and fair observers put their fingers upon the public utilities corporations in the city as at least the greatest contributing cause of the corruption of the American city.

I hope I am not speaking with the slightest danger of being suspected of local reference. I wish I might have that feeling. The fact, however, is that practically every state legislature in this country and practically every city council in this country, was either corrupted, or under very grave suspicion. In the state of Ohio, in which I now live, and to which my loyalty is unbounded, we had a legislature in my early residence there, which we called "The Garbage Legislature." Men trafficked in votes upon legislation in the lobby of a hotel immediately across from the State House, and men were heard to weep and complain because the amount they had gotten for their vote was less than some associate legislator had gotten for his; while in our city council men with ropes sat in the galleries and even then were scarcely able to exert the purifying force of an indignant and aroused public opinion sufficiently to prevent the traffickers in city franchises for public utilities from selling out the inheritance of future generations. That is in very large part destroyed now.

There is no revolution that I know of in the American nation so complete, so adequate, and so wholesome as that which has banished the crass forms of corruption from American municipal councils. As one looks over the life of the American city now, we see that sort of brutal corruption is sporadic where it exists at all, is unusual and under severe condemnation. There is not the sort of tolerant attitude toward it that there used to be. The corrupt are no longer content, and the shameless are at least ashamed when that sort of thing is now discovered.

One of the immediate resorts of those who felt the corruption of the American city most keenly, and saw its causes most clearly, was an advocacy of the philosophy, as they called it, of municipal ownership, the idea being that the granting of great privileges for the operation of public utilities in public property inevitably tended toward corruption, and that the answer was to assimilate our practice to the experience of Europe by municipally entering upon these projects.

As this expedient, municipal ownership, was an answer to a hitherto corrupting policy, municipal ownership began to have a certain moral quality in the eyes of those who advocated it in the early day. Men who were for municipal ownership were thought to be for honest municipal government, while men who were opposed

to municipal ownership were said to be opposed to honest municipal government and in favor of brutal and gang rule. That led, to some extent, to a premature indulgence, in certain communities, in municipal ownership enterprises. By that I mean indulgence in such enterprises, where the state of the public mind, outraged and aroused at previous abuses, was not yet adequately aroused to a long sustained effort of observation, constancy and care in the management and control of those undertakings.

So there came in our early history of municipal ownership a number of experiments which are regarded with great glee, by the present opponents of the policy, as failures. For that reason I am very anxious to insist, if I can, upon the view, that municipal ownership is not a philosophy, that it is not a question of morality, that it is neither good nor bad in itself, but that it is a question of social organization, a question of economic policy, a question of large expediency.

Whether municipal ownership is the proper answer to meet the utility problem in a particular place, at a particular time, must be determined not by any abstractions on the subject, but by a consideration of all the elements that enter into the making of that particular problem at that place.

One thing that the policy of municipal ownership in any city requires is that people shall comprehend it and shall be willing to sustain the conflict.

The whole controversy has now come, I think, to this state, that the privately owned public utilities are banded together to maintain the *status quo*. By that I mean that they have in large part abandoned the idea that they can secure extortionate and exorbitant grants from the public now, but the combined efforts of the privately owned public utilities companies in this country are exerted in the direction of maintaining what they have already secured. They now would, I think, be perfectly willing and perfectly satisfied to have practically every city in the country take over for public management the public utilities if they would pay them the face value of their claims, for what they have already secured. They would be willing to sell us their plants and their sins, if we would buy both. The difficulty with the situation is that we want to buy their plants and do not want to buy their sins. The consequence of that is, there is a highly confederated, expertly

organized, skillfully managed combination among the privately owned public utilities of this country to pervert and mislead and strangle public opinion on the subject.

I do not want to deal in general terms. I like to be specific about the things I am talking about. There are a number of magazines in this country which are either owned or controlled, or the directorates of which are interlocked with the directors of public utilities companies, in such a way that they are the organs of the private interests in this controversy.

It is a somewhat interesting spectacle to find that gentlemen owning, privately, public utilities now regard themselves by some sort of divine commission as the custodians and guardians of our morality and politics as citizens of a city, but that is the attitude they do adopt. They hire practically everybody who can captivate the public imagination in any way, and will sell his talents.

I happen to have here a paper *Concerning Municipal Ownership* which is published by a company otherwise anonymously known as the Municipal Ownership Publishing Company. The particular contributor to this so far as I am able to discover is a man who has made a most desirable reputation in American literature as a graceful, amusing, entertaining and until quite recently I supposed a straightforward writer. His contributions to this paper are as shameless an exhibition of the barter of high talents in a bad cause as I have ever seen anywhere. This author recently published an article on tadpoles in one of the numbers of this magazine, in which he made the statement that in the city of Cleveland's municipal electric light plant, they had used a cooling water pond to condense steam, which pond had become infected with tadpoles, and that in order to rid the pond of those tadpoles, sulphate of copper or something of the sort had been put in the pond to kill them, but that it had corroded the machinery of the plant at the same time, to such an extent that the entire investment in that plant was lost, showing a monumental sacrifice to the lack of skillful city management involved in municipal ownership. There is absolutely not one word of truth in this. There were tadpoles in the pond, and they were successfully killed, but the machinery is still operating and the plant, which he regards as a monumental failure of municipal ownership, was the nucleus and the inspiration of a plant very much larger in its cost and in its possibilities, which has today established

a maximum rate of three cents and a minimum rate of one cent for current sold for light or power in Cleveland under municipal ownership and management. Now, this author knows that they have a mayor in Cleveland, and he knows that it is not very far from New York to come to Cleveland and I make bold to say that a man of his reputation, who has secured a hearing in honest ways and who prints such misleading information to beguile the foolish about public questions, is faithless to the traditions of his high literary calling. It was a part of his burden as an author to ascertain the facts before he undertook to print anything on the subject. I do not know how much he is paid, but I know that if his pay, as is usual in such cases, is in an inverse ratio to the straightforwardness of his performance, he ought to be getting very rich.

In addition to that, the adversaries of municipal ownership are claiming that municipal utilities, public utilities, ought not to be in politics. I have had thirteen years of perfectly joyous experience on that subject. I have been for thirteen years combating public utilities in the city of Cleveland. Every campaign in those thirteen years, no matter how remote its issues might be from public utilities questions, found the forces of the public utilities very actively engaged in politics. They have a keen scent and a long sight for their interests.

I want to hold out this answer to those who fear political activity in municipal ownership: that open activity is better than secret political activity; that it is better to have our adversary out in the field where we can see him and fight him than to have him hiding behind ledgers and books that are closed accounts to public inspection, and where we never know the extent or the character of the forces we are fighting.

The question of municipal ownership is open for your discussion. I do not believe it to be a philosophy; I think it to be an expedient; I think that the progress of the movement in the future in this country is going to be very much more rapid than it has been in the past. I think one of the most important things for us as mayors and delegates and public spirited citizens to do, is to act in concert on some measures if we can, to prevent the spread of mis-information on this question so that when any question comes to be determined, or any problem to be solved, it may be in the glacial atmosphere of the kind of "facts" which Mr. Brandeis said yesterday was necessary for the predication of any sound judgment.

MUNICIPAL OWNERSHIP—THE TESTIMONY OF FOREIGN EXPERIENCE

BY FREDERIC C. HOWE,

Commissioner of Immigration, New York City.

Some years ago I was in the city of Berlin with a group of American business men and city officials, and after a luncheon given by the Burgomaster and his associates, there were a number of addresses, in which the burden of the American discussion was regret that our cities are not run in the business-like way of the German cities.

The American speakers were followed by a German Burgomaster, who said:

Yes, we know American cities; we read your reports and we have heard American business men and Chambers of Commerce, and municipal officials say the same thing—that the trouble with the American cities is that they are not business-like. Your cities in America keep your sewers, which lose money; you keep your streets, which cost money; you keep your parks and other activities which cost money; but you give away your street railways, your gas companies, your electric lighting and your telephone companies, which make money. We in Germany think that is bad business. If any one of you gentlemen as a banker gave away his good loans and only kept his bad loans, very soon he would be bankrupt.

He was followed by another German who said:

Yes, that is our idea of municipal housekeeping, to keep the good with the bad.

Twenty years ago the phrase in German cities was, "municipal housekeeping," but ideas have advanced in the last twenty years. We are now thinking of community living, of adjusting our cities to serve; to promote the comfort, the happiness and the well-being of the people in as many ways as possible, and in the majority of our activities it is not the money we make so much as the service we render.

Municipal ownership in Europe is largely the product of the last twenty years. It has become the universally or almost universally accepted policy in Great Britain, and only to a less extent is it the accepted policy in Germany and Switzerland, while to a somewhat lesser degree is it accepted in Italy, Austria Hungary and the Scandinavian countries.

The motives which have led to municipal ownership, or municipal trading as it is called in England, or municipal socialism as it is called in Germany, are several.

Possibly the most important motive is the feeling on the part of officials and intelligent public opinion, that the street railways, the gas and electric light and similar services, are just like the plumbing of a building: they must be inter-related into the city; they are a part of its structural frame work. It is inadvisable to permit a half dozen warring companies to tear up the streets. It is wrong to permit street railways to determine where we shall extend our suburbs. It is inadvisable to permit private electric light plants to determine for us the rates of charges which we shall pay. The same is true of gas. I should say that the main reason underlying the movement for municipal ownership is the necessity of treating these agencies as integral, essential, fundamental parts of the city life.

Coupled with these was the controversy over rates and charges, and the feeling that they were too high. In addition, especially in England, and to a large extent in Germany, is the feeling that those monopolies earn large profits. They were relatively easily managed, and officials thought they ought to be owned and operated by the city, in order that the profits could be used for the relief of taxation. In many cases, also, the companies had conflicts with their employees. This led to irritation on the part of the public; to a feeling that the whole community ought not to be subject to disturbances, possibly to the stopping of public utilities by private conflict between capital and labor in the public streets.

In Great Britain, of the 50 largest cities in that country, 42 own the tramways, 44 the electricity supply, 41 the gas supply and 39 the water supply. Water supplies have been owned for many years, but the movement for municipal ownership, as such, began with the street railways.

Early Policy in Great Britain.—As in the United States and Germany, the cities of Great Britain experimented with the private ownership of public service corporations prior to the adoption of the policy of municipal ownership, which is now the all but universal practice. The Tramway Act of 1870 was the general act under which grants were made to private railways for operation. Under this act the cities were permitted to lay the tracks but could not operate the roads. Franchises were limited to twenty-one years

with the provision that the city could take over the property at the expiration of the grant upon the payment of the structural value.

Under this act nearly all of the large cities granted operating contracts to private companies, which operated the system upon tracks laid by the city, the equipment being for the most part for horse traction.

The Beginning of Municipal Ownership.—Private companies operated under these contracts until the '90's, when the success of electric traction in America and Germany led to requests on the part of the companies for permission to electrify their lines, while the cities themselves were desirous of better service. Coincident with this movement for electrification there were numerous controversies between the companies and their employees over wages, hours of labor, and conditions of employment, while the cities, awakened to an appreciation of the profitableness of the industry, took action looking toward the municipalization of the companies whose franchises were close to expiration.

In the city of Glasgow the controversy between the company and the men had been prolonged and very bitter. The community sympathized with the demands of the employees, who were alleged to be overworked and underpaid. The company was unwilling to admit that the condition of the employees was any business of the city and declined to arbitrate the question of wages or hours of labor. The irritation over this question stimulated the demand for municipal ownership.

The question was agitated for several years, and in 1894 the council decided to retake its tracks under its statutory powers. But the company refused to sell its equipment, so that the city had to purchase equipment elsewhere. As a consequence of this action the company ultimately lost its total equipment investment.

The success of city operation was immediate. Fares were reduced 33 per cent over those previously prevailing, while the length of the hauls was increased. The condition of the employees was also improved. Free uniforms were added, as well as five days holiday each year.

Then the city proceeded to the electric equipment of the lines. It sent commissions to America and the continent to study the latest developments in street railway transportation, following which the entire system was rebuilt with many extensions.

The Growth of the Movement.—This success in Glasgow stimulated the movement for municipal operation in other cities, for the discontent with private operation was very general. Controversy with employees was a common cause of discontent, but probably the main operating motive was the desire of the city to control its transportation system and derive such revenue as was possible out of ownership, for local taxes in Great Britain are very heavy, and the business men and citizens saw in municipal ownership a means for relieving the rates. In addition, cities were considering the installation of electric lighting plants, and many of them felt that power stations which could be used for lighting as well as for the operation of the street railway plants could with economy be constructed. And this has quite commonly been done. A more nearly uniform load is possible by this arrangement; the day load being used for the operation of the tramways and power, and the night load for the lighting of the city. This influence coöperated with the desire to make money and the protest of the community against the condition of the employees.

The question immediately arose as to whether the cities should pay for the franchise value of the unexpired grant. This controversy was taken into the courts, which finally decided that allowance need only be made for the physical value of the property. In the case of the London county council the companies demanded \$2,939,000 for the franchise value, but the courts finally allowed only \$439,400 for the physical property.

Tramway Construction.—The street railways in Great Britain are constructed with much more permanence than they are in America. This is true of private as well as public undertakings. The girder groove rail is universally used. Tracks are heavily ballasted, while the overhead work is very substantial. Many of the towns have erected splendid shops, in which they both build and repair their cars. In consequence of the high standard of construction the capital outlay has been very heavy. In 1906 the cost of the Glasgow system was \$93,305 per mile of single track, and in Liverpool \$90,536. The London county council reports a cost of \$106,033 per mile. It is believed that the construction cost in the British cities exceeds that of the average American city (outside of New York, Philadelphia, Boston, Chicago and Washington) by approximately 50 per cent.

Provision for Comfort.—Aside from the large investment in capital account, one is impressed with the many provisions for the comfort and convenience of the people, for the street railway is under constant supervision; it touches every citizen daily. It is more difficult to disguise bad service in street railway operation than in any other public utility. Serious accidents are of rare occurrence. They have been reduced to a minimum. The same solicitude is manifested in the care of the cars. They are kept fresh with paint and are washed daily. In Glasgow and many other cities all advertisements have been excluded.

Employees are courteous and are very jealous of their positions. They seem animated by a sense of service to the community, and because of the surveillance of the public they are of necessity considerate and courteous to the riders. Council committees seem to be on the alert to better conditions and to adopt new devices. There is keen rivalry between different cities, each of which takes peculiar pride in its own enterprises, the equipment and the service rendered, as well as the annual balance sheet.

Zone System.—The zone system of fares is universal in Great Britain, as it was under private management. In a sense travel is metered, just as is gas, water and electricity. Upon each zone a fare of from 1 to 2 cents is collected, depending upon the length of the ride. There seems to be no protest whatever against this system, which leads to a very great stimulus of short haul riders.

Motives of Operation.—Four motives animate the councils in the operation of the street railways system. They are: first, the best possible service at the minimum cost; second, the relief of the taxpayers by more or less substantial contributions to the city budget; third, the widening of the boundaries of the city and the improvement of housing conditions by opening up the countryside; and fourth, the improvement in the condition of the employees.

Rate of Fare.—There is constant pressure to reduce the fares and extend the zones; but the prevailing tendency of councils is to utilize the surplus earnings for the reduction of the debt and the repayment of the loans. Despite this fact rates of fare are lower than under private management and very much lower than they are in the United States. For instance, in Glasgow there is a one-cent fare for short distances of about half a mile, and in 1912, 43.98 per cent of the passengers paid but a one-cent fare. The number

paying 2 cents formed 37.85 per cent of the total number, while the percentage paying 3 cents was 7.38. In that year over 80 per cent of all the passengers paid 2 cents or less.

The one-cent fare stimulates traffic in the center of the city and is a great convenience. It stimulates travel when traffic is light. It also enables many persons to go home for their lunches.

The average fare paid by all passengers in Glasgow (population 1,150,000) in 1912 was 1.72 cents; in Manchester (population 950,000) 2.32 cents; in Liverpool (population 816,000) 2.24 cents; and in Sheffield (population 455,800) 1.8 cents.

The average fare paid on all of the 136 tramways operated by local authorities in 1910 was 2.1 cents, as opposed to an average of 2.48 cents paid on the 138 private companies. In 1911 the total fares collected in Glasgow were \$4,748,740. At the prevailing five-cent fare charged in America these passengers would have paid \$11,898,365. The passengers on all of the publicly owned street railways in Great Britain paid \$47,437,170 on an average of 2.1 cent fares, as opposed to \$105,124,150, which would have been paid on a five-cent fare.

Financial Operations.—The total capital investment of the 136 local authorities operating street railways, which included nearly every large city in the United Kingdom, was in 1910, \$220,541,250. The gross receipts for the year amounted to \$47,437,170, against which were charged operating expense of \$29,436,216, leaving a net revenue of \$18,000,955. The percentage of net earnings to capital invested was $8\frac{1}{2}$ per cent. The publicly owned lines were operated at a lower ratio of cost than the private companies, despite the higher wages paid, the shorter hours and better conditions of employment. Working expenses of the local authorities to the gross income were 62.05 per cent, as against 62.52 per cent for the private companies. At the same time, while the cities earned $8\frac{1}{2}$ per cent on their investment, the private companies earned but $4\frac{1}{2}$ per cent.

The local authorities carried 2,102,483,010 passengers, as opposed to 675,445,481 by the private companies. This indicates the extent of public ownership, which now prevails in nearly everyone of the large cities in Great Britain.

The public undertakings are under the strictest kind of Parliamentary supervision. They are required by law to amortize their debt by annual contributions to the sinking fund. In 1910, \$5,893,875

of the gross earnings of all public plants was used for this purpose. In addition, the public companies are required to pay taxes the same as the private companies, so that public and private operation is on a parity in all comparisons of earnings.

Aside from four small communities showing a deficit which amounted in the aggregate to but \$15,000, most of the companies made very substantial contributions to taxation. The tramways of Manchester contributed \$364,987 to the relief of taxation; Leeds, \$275,000; Birmingham, \$160,000; Liverpool, \$135,000; Nottingham and Bradford, \$100,000. In Glasgow the profits, which amounted to \$265,000, are paid into a special fund, known as the common good.

In 1910 the total contributions of the public tramways to the relief of taxation were \$2,200,565. In addition, there was a gain to the public of \$7,989,434 in the difference between the average fare charged by the publicly owned tramways and the average fares of the private companies.

There is no question about the financial success of public operation. The indebtedness of the cities is being rapidly amortized. In addition to the regular debt charge provided by law, cities make very substantial contributions to depreciation and reserve. For instance, Glasgow in 1910 repaid its debt to the extent of \$448,470 and added \$1,102,895 to the depreciation and reserve. The sum contributed to depreciation and reserve, in addition to debt repayment, by Manchester was \$375,000; by Liverpool, \$427,555; and by Sheffield, \$106,980. These statistics are authoritative. Municipal authorities are required to keep their accounts according to standards fixed by the local government board. Annual returns are required to be made, while the reports are published each year and are subject to scrutiny. The books of the municipality are also audited by the central authorities, in order to make sure that all requirements as to debt repayment, depreciation and reserve are properly provided for.

Confirmation of these statistics and further details may be secured from *The Municipal Year Book*, London, which gives complete statistics of all the local authorities in Great Britain.

Service.—Overcrowding is specifically prohibited in Great Britain, and rarely is it necessary to stand. Despite the protest of street railway operators in this country that overcrowding is a necessity, Great Britain has successfully disproved this claim. In Liverpool

68 per cent additional cars are added during the rush hours. In Leeds the service is increased by 30 per cent in the morning, at noon, and in the evening. In some cities standing is prohibited.

Many cities, too, reduce their fares below regulation scale for workmen in the morning and evening. In Manchester the three and four-cent fares are reduced to 2 cents, the five and six-cent fares to 3 cents, and the seven and eight-cent fares to 4 cents. In Leeds four-mile tickets are sold for 2 cents. The purpose of these rules is to encourage workmen to live in the country and to still further adjust the tramway service to the needs of the working classes.

As indicative of the experiments made by British cities, is the instance of Bradford, which carries on a municipal express and delivery service all over the city. This service is not unlike that of the parcels post. Stamps are sold, which are affixed to parcels by the sender. Motor vans collect the parcels in the center of the city. From the central stations they are despatched in the vestibule behind the motorman. The packages are then delivered at the various sub-stations, for distribution throughout the city. At the terminals of each route a uniformed agent collects and delivers the parcels. Rates of charges are as follows: for packages up to 7 pounds, 4 cents; from 7 to 14 pounds, 6 cents; from 14 to 28 pounds, 8 cents; and from 28 to 56 pounds, 10 cents. The entire investment in the parcels delivery system is but \$17,033, which includes the cost of five motor vans. The total cost of this service in 1910 was \$31,284, and the receipts were \$39,757. During the year 675,719 packages were carried, at great economy to the merchants and citizens. Many of the shop keepers have been enabled to dispense with their delivery service. The congestion of the streets is greatly reduced, as is the unnecessary waste involved in countless delivery wagons traversing the same routes.

Other Gains from Municipal Ownership.—From a purely financial point of view the municipal tramways have succeeded beyond dispute. There is no sentiment for a return to private operation from any class. The financial gains are too obvious. The service is undeniably better on the public tramways than on the private ones. Membership on the tramways council committee is sought after as a high honor because of the opportunities for service involved. Cities, too, are eager to introduce new devices and new comforts, and representatives are constantly studying the service of other

countries. There has been a steady improvement in cars, a constant effort to better the service and consider the well-being of the community.

The double-decker type of car is universal and is very popular. The upper deck is so arranged that it can be closed in winter. Smoking is permitted on the upper deck, which is used by all classes for pleasure riding. The double deck also increases the seating capacity, and studies of the subject show that no loss of time is involved through it in loading and unloading cars.

In addition, there has been little trouble between the city and its employees, such as prevailed under private operation. The city adjusts differences through the council committee or by arbitration. But controversies of this kind have been very rare, owing to the fact that the city pays a higher rate of wage than prevails in other industries; it supplies the men with free uniforms; it allows, generally, a week's holiday on full pay, and otherwise concerns itself for the well-being of its employees. As a consequence of this a fine *esprit de corps* has arisen among the employees. They seem to take great pride in their jobs and are earnestly zealous in their effort to serve the community.

American Criticisms of English Experience.—Street railway operators in America urge that, whatever the success of municipal operation in Great Britain, it has little relation to America. They say that: first, the wages and cost of operation are lower in England than in this country; second, that the zone system makes comparison of fares difficult; and third, that the wider area of the American city still further confuses the comparison.

First, as to wages. The average wages paid in England are considerably lower than in this country. But other things qualify this disparity. In the first place, the English workman secures a number of other contributions to his wage. In addition, and far more important, the English tramway cars are very much smaller than those in America, while prohibition of overcrowding reduces the per car carrying capacity still further. Mere wages are, therefore, only one element in a comparison of labor cost, for if the overcrowded cars and their greater carrying capacity are taken into consideration, it is possible that the per unit labor cost in this country per passenger is little if any greater than it is in England. In addition to this the speed limit in Great Britain is but twelve miles,

which is very much below the speed of the average American street car outside of the congested centers.

It is further claimed that the congestion of the cities and the zone system of fares make comparison difficult, and the higher charges for long distance travels increase the rate of fare beyond the minimum. *But it is the average rate of fare that should be taken into consideration, and the average fare in Great Britain is very much below what it is in the United States.* As we have seen, for the country as a whole it is but 2.1 cents, as opposed to 5 cents in this country, while in Scotland the average fare falls to 1.9 cents. In addition, the wider dispersion of population in this country is to the advantage as well as the disadvantage of the street railways, for many persons are compelled to ride in this country who would be relieved of this were the distances shorter. Certainly, there would be a great increase in travel were the short distance hauls in this country reduced to a lower figure. In addition to these considerations, it must be borne in mind that the British companies are rapidly paying for their property out of earnings and are contributing most substantial sums to the relief of taxation.

Municipal Ownership of Gas.—*The Municipal Year Book for 1912* gives the number of local authorities of Great Britain operating gas plants at 298 and the number of private companies at 511. The total capital invested by the local authorities is \$151,002,260, and by the private companies \$460,956,555. The local authorities operate their plants at a cost of 72.86 per cent of the gross earnings, while the private companies operate at 74.87 per cent of the gross earnings. The municipal authorities earn $9\frac{1}{4}$ per cent upon the capital invested, and the private companies $5\frac{5}{8}$ per cent. The number of consumers of the local authorities was 2,666,000 and of the private companies 3,751,000.

The majority of the large cities outside of London, Liverpool and Sheffield own gas plants, and have for many years. However, gas has not been so universally municipalized as have the street railway, electric lighting and water undertakings, the reason for which being that the gas companies were granted indeterminate franchises at a time when the industry was in its experimental stages, and the introduction of electricity and the high recapture cost under the indeterminate grants have delayed municipal ownership in this field.

As in the street railway business, the cities earn large returns

on the capital invested, and with few, if any, exceptions the gas plants are all profitable. The total contributions of all the municipal plants for the relief of taxation exceed two million dollars a year. This is in addition to the provision for sinking fund charges to retire the debt, provided by Parliament, as well as appropriations for depreciation and reserve and taxes, for the public as well as the private companies are required to pay local rates or taxes.

Not only do the public companies earn a very much higher return upon the investment than do the private companies, but they sell gas at a substantially lower rate. The approximate average charge for 1,000 cubic feet by the private companies is 66 cents, while the approximate charge by the municipal authorities is 60 cents. Many cities, however, charge very much less than this. The rate in Birmingham is from 42 to 56 cents per thousand. In Manchester it is from 58 to 60 cents, in Nottingham 52 to 56 cents; the charges of the sixteen largest cities being from 42 to 60 cents per thousand.

Through public ownership the public authorities are able to experiment in a variety of ways. They provide penny-in-the-slot devices, so that the poor are able to secure gas on easy terms. Several cities maintain shops for the selling or renting of gas stoves, by means of which they stimulate the use of gas among the poorer classes. Streets, too, are lighted in a generous way, as an effective police measure. Nowhere is there any tendency to return to private ownership in this field.

Electricity Supply.—Electricity has been more universally municipalized than has gas. Cities were slow to grant franchises to private corporations, seeing in this enterprise an opportunity of making substantial profits as well as of coördinating the electric light and street railway power plants under a common management. Practically all of the large cities own their electric lighting plants, and many of them operate them in connection with the street railway service, the day load being a traction and power load, and the night load being used for lighting purposes.

Public Opinion on Municipal Ownership

I have interviewed many British officials and business men, and nowhere have I found any desire to return to private ownership. The gains of public operation are too obvious. Nowhere is there

serious complaint of the service rendered or of inefficiency in management. Generally speaking, cities are prompt to appreciate new improvements and to introduce them. Municipal plants are constructed with great stability and with adequate provision for future growth. Rarely is the suggestion heard that the plants are not a financial success. Rather, the complaint is more frequently heard that the rates and charges are higher than is necessary in view of the financial earnings.

Further than this, it is almost universally true that the progressive cities, the cities that command the highest type of men in the council, that have the finest civic spirit, are those which have gone in most extensively for municipal trading. The most influential men in the community are attracted to city service by the magnitude of its undertakings and the opportunity for service which the management of these activities makes possible. Men give generously of their time to serve upon council committees, they go from city to city and even to foreign countries to study improved methods, and indulge in a healthy rivalry in the administration of their departments. In addition to the financial advantages of municipal ownership, substantial ethical and psychological gains have accrued in the attitude of the community to the city. All classes take an interest in its activities, in the reports of the various departments, in the discussion over administration, and in the balance sheets of the street railway, gas, and electric lighting undertakings. The communal ownership of many services has awakened a political reaction on the part of the community, that has undoubtedly created a better civic spirit than that which prevails in those few towns where the public service corporations have been left in private hands. And this, in many ways, is the most substantial gain that has come from municipal ownership.

German Experience

Of the 50 largest cities in Germany 23 own and operate the street railways, 50 the gas works, 42 the electricity supply, and 48 the water supply. In addition, German cities own many other activities. Those upon the water front own and operate their harbors. They operate municipal savings banks and pawn shops, they conduct wine handling businesses, land speculation schemes and many other

activities of profit and service that are not included in the program of municipal ownership in Great Britain. The German city has carried socialization further than any city in the world, and it has done it despite the fact that the German city is governed by business men, who, through the limitations on the suffrage, elect the members of the council, who in turn select the administrative agents.

The most progressive cities in Germany have monopolized all of the public service undertakings, and the systems installed in cities like Frankfort, Düsseldorf, Cologne and Dresden are in rather sharp contrast to the privately owned street railway lines in such cities as Berlin and Hamburg. The construction is of the most permanent kind, while the cars are comfortable and are equipped with many conveniences for the comfort and safety of the public. Beautiful waiting stations are found on the street, advertisements are excluded from the cars, transfer stations are to be found, while many other services have been introduced by the public officials. The rate of fare upon municipal lines is generally $2\frac{1}{2}$ cents.

In Germany, as in England, public service corporations are run primarily for service rather than for profit, although a number of cities do derive a substantial sum for the relief of taxation from this source.

One of the motives leading to public ownership of the means of transportation in Germany is the comprehensive town planning schemes which have been adopted by all cities. Housing conditions in Germany are bad, almost as bad as they are in Great Britain. Street railway companies were unwilling to extend their lines to the suburbs; they were unwilling to make improvements in the service. Cities found it impossible to regulate private operation so as to coordinate the service with the town development projects which had been carried through on a most elaborate scale. When new streets are being laid out, the city itself does all the construction work. It not only builds the sewers but installs the water and gas mains and electric lighting conduits. The city also builds the street railway lines, which are solidly imbedded in the street construction. As a consequence of this ownership and control of all these services streets are permanently built; they are not torn up by warring individual companies, and the citizens are saved from the annoyance, expense and dirt of constant interference with the highways of the city by individual operators.

Nowhere in Germany where public ownership prevails is there any suggestion of a return to private ownership. Officials, business men and all classes unite in approval of the transfer of these agencies to the public.

Social Gains from Municipal Ownership

Undoubtedly municipal ownership is justified on financial grounds. Even in America public water and electric lighting plants are almost universally operated at a lower cost to the community, with better service and with more regard for the convenience of the public than are the private plants. But the financial gains are the least important. The real gains are social, ethical and political. Where municipal ownership prevails there is none of the corruption and class warfare which is found in America and which is largely traceable to the private ownership of these valuable concessions from the community. The protracted contests which rent the city of Cleveland for ten years, which continued like a civil war in San Francisco, which delayed progress in Detroit, Toledo, Denver, Chicago, and which have characterized the political life of Philadelphia, are unknown. There are no franchises to scramble for, no great privileges to be secured through the bribery of councils and the control of the city. I am satisfied that the franchise corporation is more largely responsible for the corruption of the American city than is any other agency. And the ending of this corruption can only be effectively brought about through the transfer of this public service into public hands. And one explanation of the honesty of the British city is the policy of municipal ownership which prevails, for the great prizes which in this country solidify the talented men of the community against the community, are in Great Britain in public hands. In addition to this, private ownership of these activities divorces the best talent of the city from interest in the city politics. Conditions are the same in all cities, especially where regulation or municipal ownership is a political issue. The public service corporations employ the lawyers, they own or influence the press, they open or close the avenues of political and social preferment. They become the public opinion of the community. The professions reflect this point of view. Public service corporations are intimately related to the banks in which they make the deposits and through which they do their financing. The banks in turn

control the credit of the city and through this control imperil the business existence of men who identify themselves with the public against these corporations. Further than this, talented men are excluded from municipal politics. They are excluded by reason of the conflict of interest. They cannot aspire to membership on the council, even if they desired. All this is reversed in England and Germany. Men in these countries are free to enter municipal politics. Their purse is not at war with their patriotism. And just as men are eager to serve on the board of directors of a railway or of street railways in this country, so in European countries men of like talent are eager to serve the largest corporation in the community, which is the city. To be an alderman is the goal of many men's desires, while membership upon the tramway, gas or electricity committee is the most sought after assignment in the council. Men seek these posts for the same reason that they aspire to be on the directorate of private corporations in this country. They enjoy the power which it offers, to which is added the joy of service to the community, which sprang into new life in Great Britain coincident with the policy of municipal ownership.

Mr. John Burns, of the British Cabinet, said to me that the renaissance of local government in Great Britain was coincident with the period of trading. It covers the last twenty years. A new enthusiasm came into existence when the community began to own these services, which touched the people every day in countless ways. The affection of the people is awakened, while their interest in public affairs is kept alert.

The tramways are a topic of constant discussion. The balance sheets of other towns are carefully watched. In the council and on the streets the earnings, rates of fare and disposal of surplus are matters of constant discussion. When a new tramway line is opened a holiday is declared; business is suspended; the cars are covered with bunting and a day of general rejoicing is indulged in.

It is probable that the tramways are the most efficient department of the city, because of this very inspection, which makes bad administration impossible. In addition, officials, citizens and employees seem animated by a pride in their positions that extends to all classes.

PASADENA'S MUNICIPAL LIGHT AND POWER PLANT

BY C. WELLINGTON KOINER,

Electrical Engineer and General Manager, Municipal Lighting Works
Department, Pasadena, California.

The city of Pasadena made the first plans for installing an electric utility in 1906. The city was compelled to abandon the private light corporation and to establish a municipal light and power plant, in order to supply good service for street lighting, and to give her citizens electrical energy at a reasonable price. The first installment of bonds was voted in 1906, and marked the beginning of one of the most unrelenting fights between private and public interests that any American municipality has had to maintain in putting into operation a utility of this kind.

Pasadena has the reputation of being a city of wealth and culture; yet, contrary to what one would naturally expect, it is operating under one of the most democratic charters. This charter provides:

That the city shall have the power to purchase, receive, have, hold, lease, use and enjoy property of every kind and description both within and without the limits of the city, and control and dispose of same for the common benefit.

And it specifically provides:

That the city shall have the power to construct and maintain water works, pipes, pipe lines, aqueducts and hydrants for supplying the city and its inhabitants with water, and the right to supply water to persons not living within the city.

To construct and maintain gas illuminating works for supplying the city and its inhabitants with light, heat and power.

To construct and maintain works for supplying the city and its inhabitants with telephonic and telegraphic service.

To construct and maintain and operate street railways and other means of conveyance, together with all rolling stock, power houses, equipment, appliances and appurtenances necessary to the proper use, operation, management and control of same.

Although fully aware of the powers thus conferred upon the city of Pasadena by her charter, The Edison Electric Company, a cor-

poration now known as the Southern California Edison Company, sought to contest the city's right to issue bonds for the purpose of building its own electric utility. They sought to have the city restrained from issuing the first installment of bonds, and put every obstacle they could in her way, causing the city much trouble, in that the legal department was compelled to prepare the cases and answer all of the innumerable complaints that could be devised by a company of this kind.

Pasadena was extremely fortunate at this time in having as city attorney the Hon. J. Perry Wood, who represented the municipality in its actions, and well deserves the credit of having successfully combatted this powerful corporation at every turn in defense of the city's right. In every instance, when a case was to come before the courts, the company would pray for its dismissal, and in each instance this was granted. The city's legal department was thus put to a great deal of trouble in going into the matter and preparing the city's cases and getting everything ready for the hearings.

The fact that the first bonds carried by only fourteen votes necessitated going carefully into a recanvass of all the votes cast at the election. However, the case to restrain the city from selling its bonds was dismissed, and the recount of the ballots did not change the results of the election. The city therefore proceeded to sell its bonds. At this point more obstacles were encountered. Influences were at work to prevent the city from disposing of its bonds, regardless of the fact that no city in the country should have any better credit than Pasadena. Nevertheless, the bonds were finally disposed of.

In addition to the first installment of bonds, an appropriation for the year 1906-1907 was covered by putting into the taxes for that year a levy of 18 cents on every hundred dollars' assessed valuation. This raised \$52,758, which was added to the first bond issue for construction and extensions. The city was only preparing to build a plant for operating street lights at this time, though its intention was to enter into the commercial light and power business later. The first installment of the plant was finished and the streets of the city illuminated by the municipal plant on July 1, 1907.

Pasadena was growing very fast, and we required considerable extensions in poles, wires and other equipment for street lighting. These needs increased until they finally covered commercial light

and power. The power company was in the habit of requiring people who wanted light to put up a certain amount of cash per pole for extensions to reach their property in various parts of the city. The high cost of current and the policy of the company in dealing with its patrons hastened the city's going into the business of furnishing electrical energy for commercial light and power purposes. In 1908 an additional bond issue of \$50,000 was voted for the purpose of completing the street lighting system, and using whatever balance remained for entering upon the commercial light and power business.

The writer took charge of the Pasadena plant March 1, 1908. At this date the plant had been furnishing street lights for eight months, and had not yet won the confidence of all the people. The street lighting system was soon completed with the \$50,000 of bond money. Out of this sum there remained a balance of approximately \$14,000, which was used for the commercial light and power end of the business. On October 1, 1908, the first customers were supplied. Others were supplied with current as fast as the city's funds would permit.

The citizens of Pasadena had been paying 15 cents per kilowatt hour prior to the installation of the municipal light and power plant. However, to forestall the installation of this plant, the Edison Company dropped to a rate of $12\frac{1}{2}$ cents per kilowatt hour for the first 666 kilowatt hours, less 10 per cent for prompt payment.

It was calculated that the city should begin serving electrical energy at this period for a maximum base rate of 8 cents per kilowatt hour scaling down for quantity consumption, with a minimum of 80 cents per month; and a base rate of 4 cents per kilowatt hour for power, scaling down for quantity consumption, with the promise of further reductions as business increased. These rates were met by the corporation with the offer of flat rates along streets where the city had begun to furnish commercial light and power. People who had been paying the company high rates were now offered electrical energy in some cases at \$1.25 per month flat rate, without limit as to quantity used, free lamps were provided, and the loan of heating appliances in some cases—in fact, any accommodation to prevent the consumers from using city service.

We immediately saw that, to protect the city's interests, it was necessary to provide by ordinance that all current must be sold by meter measurement, allowing the corporation to make any meter

charge that it chose, with a maximum of 11 cents per kilowatt hour.

We at this time asked for a bond issue of \$150,000 for extending commercial light all over the city. For only a few short months had the people had the advantages of cheap electrical energy, and they showed their appreciation by voting the bonds seven to one in favor of extending the plant, which, by the way, settled the policy of the city of Pasadena in regard to municipal ownership in our city. After the bonds were carried by this large majority, there was no question about the people wanting to extend the municipal system.

With this money and our earnings we proceeded to enlarge the plant and extend it over the entire city. As our business increased during the period of construction, we reduced the rates to 7 cents per kilowatt hour. The private company, always operating below us in rates, immediately established a 5 cent rate, which was 2 cents below our maximum base rate for light. This, of course, was done with the view of preventing the city from obtaining customers, and of making the city's plant unprofitable. However, the company's plan of underselling did not prevent loyal Pasadenans from supporting their own plant, even at the higher rate. Their support resulted in a larger output and enabled the plant to demonstrate the truth regarding cost of generation and distribution of electric current.

The earnings of the municipal plant were such that the city again lowered the rates to a maximum base rate of 5 cents per kilowatt hour for light, scaling down to 3 cents, and a maximum base rate for power of 4 cents, scaling down to 1.2 cents per kilowatt hour. Up to the time of this reduction to 5 cents, the private corporation was charging the same maximum base rate. It immediately lowered its rate to 4 cents, with the threat that it would go below any rate made by the city. This difference in rates continued until September, 1913. However, in spite of the difference in rates charged at this time, the number of consumers of municipal energy increased to 5,000.

The city had the legal right to fix the rates for electrical energy, and could have regulated the rates of any private corporation to those charged by the city. The writer favored this action, as he had always believed that a large corporation, furnishing electrical energy to eighteen or twenty communities from a common hydro-electric system, should not play one community against another by selling current below cost in one, to throttle a competitor located

there, and recoup its losses by charging higher rates in all, or some, of the others.

In March, 1913, the city of Pasadena finally passed an ordinance to take effect some months later, regulating the power rates to equal those charged and fixed by the utilities board of the city of Los Angeles, with the provision that either the municipal light department or the private corporation in competition with the city could file a schedule of lower rates than those fixed by the city, providing, however, that with the schedule was filed an inventory of their property and a statement of income and expenses, showing that their business was earning at least 4 per cent on the legitimate investment in the property.

To comply with the ordinance, the city immediately filed its schedule of property—(I might add here that the city has always complied with ordinances of this character)—showing that we were earning at least 4 per cent, on our investment. The company, however, did not file a schedule until January, 1914, at which time they asked to lower their power rates to those employed by the city of Pasadena. In their schedule of property the company figured an investment against Pasadena, as of December 31, 1913, of \$940,-461.44 tangible property, to which they added \$235,115.36 to cover going value and other intangibles. In submitting this statement of property, income and expenses, they showed a deficit of \$9,286.26, not including interest on tangible investment, which, if added, would increase their deficit to approximately \$46,904.72. The city commission did not acquiesce in this reduction at once, and notified the company's representatives to explain to them how they were going to turn the deficit of previous years into profit the coming year, so as to show a return of at least 4 per cent on their investment. Inasmuch as the burden of further loss was all on the company, they were permitted to lower the rates to those charged by the city for power. It remains to be seen whether or not the company can show an earning of 4 per cent on their investment the coming year at this lower rate, in view of the fact that 1,927 electric meters have been added to the lines of the city's plant during the year ending June 30, 1914, and we are still gaining at a rapid rate.

Relative to the lighting rates of the power company, The Unjust Competition Act, Senate Bill 53, Chapter 276, was passed by the last state legislature. This bill was prepared by the Honorable

Senator William J. Carr, formerly our city attorney, and provided for the prevention of unfair practice on the part of utility and other corporations, which furnished commodities in one community and discriminated against other communities. It was this act which resulted in the company's asking to equalize their rates the same as those charged by the city of Pasadena in September, 1913. As is evident, the corporation was compelled to choose between doing this and lowering their rates in other communities served to those rates it had been freely giving in the city of Pasadena. Since the equalization of rates, the city has increased its customers to 7,112 as of October 26, 1914.

At the time the first bonds were issued to build the city plant, no direct offer was made to the company by the city to purchase its system. However, in 1909, when the bond issue for extending the municipal commercial light and power service carried by a vote of seven to one, a proposition was made to the private corporation for the purchase of its distributing system, and also for the purchase of electrical energy, providing it could be obtained cheaper than the city could generate it with its steam plant. The private corporation made a counter proposition to purchase the city's plant. The facts are, the city was in the market to purchase but not to sell. The city's answer, as a result of these negotiations, was a redoubled effort to enlarge its plant and increase its business with the proceeds of the bond issue of \$150,000.

Since this time the city has had negotiations with the company's representatives with an idea of purchasing the Edison Company's distributing system in the city of Pasadena, but without success, the company refusing to dispose of its property in that locality. It is doubtful, however, whether Pasadena will again offer to purchase the system of its competitor. The city has extended its lines throughout its entire territory, and to purchase the company's system now would result only in burdening the taxpayers with a large sum for duplicate property, most of which the municipal plant could no longer use. Now that the rates are equal, the fight will be finished on the basis of service.

The question naturally arises in the minds of some, "Why is it that everybody does not use municipal light and power?" This can be answered only by stating that Pasadena is the home of a large number of the officials of the Southern California Edison Company,

and approximately 76 of its stockholders. As a matter of course, the company brought to bear every possible influence against the successful operation of a city plant. The question can also be answered by stating that a corporation receiving liberal rates for its service often uses a portion of the money thus obtained from the citizens, to deceive them through the medium of newspapers, periodicals, paid solicitors, and other means. Pasadena has been fortunate in having the undivided support of one good, clean newspaper. In fact, we had the support of both newspapers at the start, until one changed ownership and suddenly changed its policy. It has required a fighting spirit on the part of the city officials to stand up against the continued and various onslaughts of the corporation. Attacks would be made, and some citizen who, perhaps, was under obligations to the company would sign them. However, in the end these have all worked as a boomerang against the corporation itself.

The paper that changed its policy made a practice of attacking the writer in a most villianous manner, in the effort to pick to pieces various monthly reports which gave details of operation of the department. Time, however, has given added proof of the correctness of these reports. No attention was paid to these attacks. The paper just cited has changed management several times, and has recently been sold, and we sincerely trust it will once more join the ranks of our supporters.

It has required faithfulness and loyalty on the part of our citizens to pay their municipal plant, month after month for over six years, fully 25 per cent more than the private corporation charged. Pasadena has been reputed to be a city of wealth and culture, yet it is made up of a majority of people who are cultured but not wealthy. Nevertheless the people of small means have loyally and faithfully patronized their own plant, extending their limited custom as their contribution to make municipal ownership a success. And here I might add that most power companies claim there is little to be earned in supplying the residence section of a city. In Pasadena we began furnishing the residence section first and found that at former charges for current great profits must have been realized from supplying residences. The fact is, the business section of Pasadena is comparatively small for a city of 42,000. Los Angeles is a great business center and so close at hand that a large proportion

of Pasadena's residents transact much of their business there. It is only within the last few years that our business section has expanded. Furthermore, we have very little manufacturing; therefore, our receipts from power sales are lower than in most other cities of like size. The claim, therefore, that it is not profitable to serve the residence section of a city at a low rate, has been exploded, although some companies even claim it is unprofitable to serve the residence section of a city. Yet 53.6 per cent of our business is carried on in the residence sections, leaving 26.9 per cent for power, and 19.5 per cent for commercial light.

You will concede that in the past many cities have seriously discussed municipal ownership of electric light and power; but they have failed to get started, because of the opposition of private interests. Every success like that of Pasadena, Seattle, Alameda, Riverside, Tacoma, and other plants on the Pacific coast, and Marquette, Michigan; Holyoke, Massachusetts; Jacksonville, Florida; Kansas City, Kansas; South Norwalk, Connecticut; Winnipeg, Canada; Cleveland, Ohio, and various other successful municipal plants, hastens the time when all cities will be too well informed to be affected by such opposition as that offered by private corporations. San Francisco's undertaking in municipal ownership of street railways, for instance, is most successful and akin to an electric light and power enterprise.

The question was propounded by the corporation and never allowed to rest, "If the city of Pasadena has the right to regulate rates, why build a municipal plant?"

The answer is that, through no regulating body in existence in the United States today can a city regulate rates and service to the satisfaction of the public as can be done by a municipally owned and operated plant, conducted as a business proposition. It is not because the regulating body does not serve the public to the best of its ability, but it is because of the obstacles confronting it. Higher values must be allowed, or generally are allowed, owing to the intangibles added to the value of the tangible property, when placing values upon the property of public service corporations, as compared with the real cost of a municipally owned plant. The cost of money is greater to the public service corporation than to the municipality, and the operating expenses are generally higher.

Heretofore utility corporations have regulated cities instead of

a city's regulating rates for utility service. Now, however, a change involving a hard struggle is taking place, and during the course of this struggle, cities are learning that it is far better to operate certain of their own utilities than to leave them in private hands, even under the best of regulation. Witness the rates charged in cities where regulating bodies have power to regulate rates; compare them with the rates charged by municipally owned and operated plants giving a high class service, and you will find that the lowest rates in the United States are those charged by municipally owned utilities. It takes as much ability to regulate rates as it does to operate a utility. While applying such ability in regulation, it would be better to apply it to operation and to allow the city's patrons as a whole to receive any additional benefits.

As to any city's ability to manage its utilities, the writer believes that a city government is as good as the people make it. So it remains with the people of a community to maintain such a standard of government that there will be no question as to the fidelity with which any of its departments of utilities is managed. Although as yet unused in Pasadena, we have the mighty instruments of initiative, referendum and recall, which can be made a corrective power in the conduct of public business.

Some prominent people have stated that the initiative, referendum and recall, and other progressive laws, are distinctly un-American. Those who make these statements forget that this is a republic—a democratic form of government—and that the people should rule, or should have the privilege of ruling if they so desire. We all agree that every individual should have the power to choose and make his own living, and should be given freedom to conduct business along legitimate lines. However, this does not prevent the government or a municipality from conducting its own utilities. Why should the city run the sewer system, police department, insane asylums, parks, schools, garbage incinerators—all of which are non-profit sharing utilities—and turn the electric light, gas, telephone, water, street railway properties—which are profit sharing—over to private corporations?

Some of the communities on the Pacific coast have arrived at the conclusion that it is time for them to begin to acquire and operate all profit earning utilities, in addition to the non-profit earning utilities they already operate.

A civic bulletin published monthly by the City Club of Berkeley, California, dated March 20, 1914, contained a report entitled "The Success of Municipal Ownership of Electric Light Plants in California. The Situation in Berkeley."

First, a Financial Statement of the Operation of Municipal Plants in California.

Second, Conclusions and Criticisms.

Third, The Lighting Situation in Berkeley.

Fourth, Detailed Statement for the Three Largest Plants in California.

The financial success of public ownership and operation is clearly shown by comparing the summaries of reports of the seventeen lighting plants in this state.

It is interesting to note the great variety in size and character of the cities in this list, which demonstrates that the ability to operate public utilities is not a question of population or location. The degree of success depends, as in private business, largely upon the ability of the man in charge of the undertaking.

A personal inspection was made by one of the committee of all these plants and the information given in this report was obtained directly from the various officials.

These figures have been carefully analyzed and checked, and referred to the several cities for correction and approval.

(Signed) The Municipal Lighting Committee.

J. T. WHITTLESEY, *Chairman*,

T. H. FALLON,

W. L. HUBER,

J. J. JESSUP.

The saving resulting to the citizens of Pasadena by reason of the difference in rates charged by both the private company and the municipal plant within the limits of Pasadena, and the rates charged by the company during the same period in the surrounding towns, since then, is a tremendous one. It amounts to \$731,083.96, or more than enough to cover the entire cost of our municipal plant. This is a very conservative estimate, and is based on the kilowatt hours sold.

Pasadena has a net investment in its municipal light and power plant in the sum of \$566,633.75, after allowing for depreciation. After paying all operating expenses, charging \$118,899.80 for interest on the total average investment, and charging off for depreciation the sum of \$130,871.31, this department has a surplus of \$71,110.08. As will be shown on page 21 of the *Seventh Annual Report*, there

was a deficit during the first two years. This was all wiped out in subsequent years as can readily be seen from the above.

While the competitor of the municipal plant in Pasadena is enjoying the privileges of hydro-electric power, the city of Pasadena has been operating a steam plant, generating electricity by means of crude oil at prices ranging from 70 cents to 96 cents per barrel, or equivalent to a rate of \$3.25 per ton for coal. The people have been highly pleased with the service rendered by the city for the reason that the steam plant, located in the city close to the distributing system, is much more reliable than long distance transmission lines, which sometimes go out of service in times of storm, to the great inconvenience of consumers. (This does not apply to hydro-electric plants located close to the distributing system.)

Our schedules of rates are not compiled with a purpose of charging all that a customer can be made to pay, levying a high rate for residences and lower rates for business houses, etc.; but all our customers pay the first rate for the first quantity and the same rates for the same succeeding quantities—no preference. The same thing applies to electrical energy for both light and power purposes.

The rates for electric energy for all classes of service are as follows:

Street Lighting Rates

	per annum
Arc Lamps, 6.6 ampere.....	\$60.00
60 c.p. Tungstens.....	12.00
80 c.p. Tungstens.....	12.00
200 c.p. Tungstens.....	48.00
400 c.p. Tungstens.....	60.00
Cluster posts 3 cents to 4.3 cents per kilowatt hour.	
	per kwh.
Average rate received for cluster lighting for past year.....	.03412
Average rate received for all street lighting.....	.04681

Power Rates

“Class A”—The first 100 kilowatt hours of energy, or less, furnished in any one month to any consumer, 4 cents per kilowatt hour.

“Class B”—The kilowatt hours of energy furnished in any one month to any consumer in excess of one hundred kilowatt hours, and not exceeding 300 kilowatt hours, 2.4 cents per kilowatt hour.

“Class C”—The kilowatt hours of energy furnished in any one month to any consumer in excess of 300 kilowatt hours, and not exceeding 500 kilowatt hours, 2.4 cents per kilowatt hour.

"Class D"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 500 kilowatt hours, and not exceeding 1,000 kilowatt hours, 2 cents per kilowatt hour.

"Class E"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 1,000 kilowatt hours, and not exceeding 1,500 kilowatt hours, 2 cents per kilowatt hour.

"Class F"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 1,500 kilowatt hours, and not exceeding 2,000 kilowatt hours, 1.9 cents per kilowatt hour.

"Class G"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 2,000 kilowatt hours, and not exceeding 3,000 kilowatt hours, 1.8 cents per kilowatt hour.

"Class H"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 3,000 kilowatt hours, 1.2 cents per kilowatt hour.

A monthly minimum charge will be collected for electrical energy of \$1 per meter of $1\frac{1}{2}$ kilowatt capacity or less, and \$.75 for each additional kilowatt of meter capacity required.

Average rate received from the sale of electrical energy for power	per kwh.
for the past year.....	.01942

Lighting Rates

For incandescent lighting:

"Class A"—The first 100 kilowatt hours, or less, of energy furnished in any one month to any consumer, 5 cents per kilowatt hour.

"Class B"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 100 kilowatt hours, and not exceeding 500 kilowatt hours, $4\frac{1}{2}$ cents per kilowatt hour.

"Class C"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 500 kilowatt hours, and not exceeding 1,000 kilowatt hours, 4 cents per kilowatt hour.

"Class D"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 1,000 kilowatt hours, and not exceeding 2,000 kilowatt hours, $3\frac{1}{2}$ cents per kilowatt hour.

"Class E"—The kilowatt hours of energy furnished in any one month to any consumer over 2,000 kilowatt hours, 3 cents per kilowatt hour.

For arc lighting:

"Classes A Arc"—The first 100 kilowatt hours, or less, of energy furnished in any one month to any consumer, 4.9 cents per kilowatt hour.

"Class B Arc"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 100 kilowatt hours, and not exceeding 500 kilowatt hours, $4\frac{1}{2}$ cents per kilowatt hour.

"Class C Arc"—The kilowatt hours of energy furnished in any one month to any consumer in excess of 500 kilowatt hours, 4 cents per kilowatt hour.

A minimum monthly charge of 50 cents per meter of three kilowatt capacity, or less, and 30 cents for each additional kilowatt of meter capacity required, shall be made for each meter.

All energy furnished through or measured by a meter used for any incandescent lighting shall be paid for at incandescent lighting rates.

All energy furnished through or measured by a meter, used for measuring energy used in arc lighting and not for any incandescent lighting, shall be deemed arc light energy.

Upon request of consumer separate meters will be furnished for incandescent lighting, arc lighting and power and heat purposes.

Carbon and Gem lamps of such candle power as the Department can conveniently carry shall be furnished free for renewal purposes to all consumers.

	per kwh.
Average rate received from the sale of electrical energy for lighting for the past year.....	.04954
Average rate received from the sale of electrical energy for all purposes.....	.03724
Cost of all current sold, including interest and depreciation..	.03105

After paying all operating expenses and charging off interest on the total average investment, and charging up sufficient to cover depreciation, the plant had to its credit a surplus for the year ending June 30, 1914, of \$29,360.92.

I submit the following balance sheet as of June 30, 1914:

BALANCE SHEET AS OF JUNE 30, 1914

<i>Property Account.</i>	\$557,255.67	<i>Funded Indebtedness.</i>	\$275,150.00
Real estate, station equipment, overhead and underground lines, transformers, meters, etc....	\$684,966.49	Total bonds issued.....	\$327,000.00
Less depreciation reserve to June 30, 1914.....	127,710.82	1902 4 per cent (transfer 1914).....	\$2,000.00
		1906 4 per cent.....	125,000.00
		1908 4 1/2 per cent.....	50,000.00
		1909 4 per cent.....	150,000.00
		Less bonds redeemed.....	51,850.00
		Paid out of taxes.....	43,725.00
		Paid out of oper. surplus.....	8,125.00
		<i>Premium Received on Bonds.</i>	
		Taxes of year 1906.....	52,332.35
		Street Lighting Appropriation 1906.....	2,299.95
		Real estate transfer 1914.....	6,000.00
		Loan—General fund.....	40,000.00
		Bonds redeemed.....	43,725.00
		Bond interest paid.....	64,894.51
		Balance carried forward.....	488,238.24
			69,017.43
	\$557,255.67		\$557,255.67
<i>Balance from Capital Account.</i>	\$69,017.43	<i>Accounts Payable.</i>	\$5,311.26
Inventory—June 30, 1914.....	20,743.46	Balance June demands.....	\$5,255.08
Personal Property.....	9,378.08	Sundry deposits, etc.....	55.18
Autos, tools, furniture, etc.....	\$12,538.57	<i>Reserve for Interest—Net Balance.</i>	
Less depreciation reserve.....	3,160.49	Charged on total average investment.....	118,890.80
<i>Accounts Receivable.</i>	18,168.91	Paid bond interest from taxes.....	\$64,804.51
Commercial light and power.....	11,906.52	Paid bond interest from surplus.....	12,818.75
City streets and buildings.....	4,061.71		77,713.26
Sundry accounts.....	2,110.66	<i>Operating Gain—Fiscal year.</i>	
<i>Office Cash.</i>	300.00	Surplus Account—Balance at July 1, 1913.....	29,360.92
		Oper. profits realized to July 1, 1913.....	41,749.16
		Less charge—Muller Judgment.....	9,000.00
	\$117,607.88		\$117,607.88

I wish to state that the depreciation fund and surplus fund have been used for extensions. Money advanced from taxes for bond interest and redemption was returned by the department for one year only. During the other years, that portion of the earnings covering the bond and interest payments, was also invested in urgently needed extensions to the distributing system.

In "Contribution from Taxes" is included the amount of money paid from the general fund for redemption of bonds as they fall due, together with interest on the bonds. The policy of this department has been not to issue any more bonds than are absolutely necessary. Therefore, the total amount of bonds issued directly for the plant was only \$325,000. The balance of the money was paid through the earnings of the plant, and through contributions from taxes. The net earnings of the plant cover the depreciation and surplus accounts; also one year's interest on bonds, and one year's redemption of bonds. "Contribution from Taxes" covers interest paid on outstanding bonds every year except one, and redemption of bonds every year except one. So long as the people prefer to finance extensions in this way, there will be no bond issues until the growth of the city demands a larger expenditure than our depreciation and surplus funds can provide.

You will notice in the balance sheet there is a loan from the general fund of \$40,000. This loan has been permitted to stand until the demand for extensions slackens and the department can return it.

In the course of competition, our competitor has at times had as many as ten or eleven solicitors at work in the field, endeavoring to secure the city's customers. As a matter of course, in conducting our department along modern business lines, we have employed and do employ able solicitors; however, not half as many as our competitor. In addition to our regular paid solicitors, we have a large number of volunteer solicitors—that is, people who are interested in the success of their municipal plant. These people solicit their neighbors' patronage. People who are coming into the city as new residents are advised of the situation, their business sought by these volunteer solicitors, and, in nearly every case, their patronage is secured. One of the fundamental principles in operating this department has been to impress this fact on the hearts and minds of our people: This is their plant, their property, and they are the stock-

holders; the low rates are their dividends, and all benefits go to them.

Any municipality entering into the light and power business must, as a matter of course, seek the business according to the most modern and legitimate methods, and must not sit back and wait for the business to come to the city plant. Even if the city has the monopoly of the field it should conduct its business with a view of serving the public in the most efficient manner, ever remembering that the customers are the employers.

We have organized what is known as the Municipal Light League, composed of customers of this department, and, whenever the private corporation has become unusually active, these people help to secure additional customers for the municipal plant. Since the establishment of the lighting department, the city has acquired all of the water plants located within the municipality and consolidated them into one system, covering the entire city, showing further that the city is not adverse to acquiring other public utilities. Electrical energy is furnished from the municipal light and power plant for pumping much of the water used within the city, and in some years this requires considerable energy. A city owning and operating her utilities can thus establish the fullest coöperation between them, thereby raising the efficiency to a maximum.

Pasadena, in the operation of her electric utility, has had an eye to humanity and has not sought to build upon the false economy of grinding down the employees of her electric utility. Conditions of employment in our plant are as good as any that we know of in our section, and better than those of most places. The working time is forty-eight hours per week for the employees—except for the office force, which is forty-four hours per week with ten days' vacation per annum. While our conditions of employment are a great deal better than those of many similar concerns, nevertheless we have some room for improvement in some respects and hope ultimately to reach our ideals.

The average opponent of municipal ownership says that it has been a great waste of money in Pasadena for the city to duplicate the existing power company's lines. As to the saving effected on the part of the citizens, I wish to refer you to the amount saved by reason of the difference in rates referred to elsewhere in this paper, which amounts to more than the total cost of the plant. And, based upon

the same reasoning, you can readily understand that the company long ago received back into its treasury the total amount of its investment in the city of Pasadena, because of the high rates they formerly charged. By reason of this difference in rates, the citizens have the value of their electric utility already saved, partly invested in the plant and partly in their own pockets. On the other hand, the company collected the value of its property back in high rates before the installation of the municipal plant.

Therefore, you can readily understand that, before the municipal plant was built, the citizens paid enough in rates to give the company back its money, and since the municipal plant has been built (seven years ago) the people have stopped paying this extra tribute to the public service corporation and have saved the value of their plant. To be sure, there are two plants in Pasadena; yet the people have suffered far less economic loss than if the old condition had continued unchanged.

We must conclude that where a city cannot purchase the utility it desires, the same methods employed by Pasadena can be repeated. It may not be possible to do this in every community, but we know from experience that it can be brought about in many of our American municipalities.

The argument put forth by the opponents of municipal ownership is that rates are not the only thing to be considered. I want to answer that by the statement that the controversies and contentions over rates are at the bottom of most of our public utility disputes. The price paid for electricity, gas, etc., is a tax collected monthly instead of at the end of the year. We all agree that service should be A-1 and reasonable in price. It must be acknowledged that the disputes and the clashing of interests of the public and public service corporations are at the bottom of many, if not most, of the scandals of American municipalities. As an illustration, referring to our own section of the country, San Francisco's public service corporations were the direct cause of the disgraceful acts on the part of some of the city officials who ultimately landed in the penitentiary.

As American cities take over all profit earning utilities, there will be a manifest increase in efficiency in municipal government. This will eliminate the public service corporations' tendency to influence public officials, and will take them out of politics. There will not be the incentive to put into public offices men who will do their

bidding. Then city officials can give all their time to the conduct of the city's affairs and its utilities, without having to fight off public service corporations; then American cities will offer greater attractions and greater incentives to young men to enter the service of a municipality. We are told that, under municipal operation, the management will not be as good as under private management; that, although cities can have cheaper money for the utility, they will render poorer service. It will be far easier to deal with employees of these municipally owned utilities than it will be to control and regulate public service corporations as they exist today. The fact is, we find that municipal employees, operating the city's utilities, feel a great interest in the city's properties; they realize that they, in a measure, are stockholders, and if the city sets a high standard of working conditions, with reasonable pay, there will be no obstacles, no complaint or trouble in getting along with the employees operating the various utilities. Municipalities will, of course, employ practically the same employees that are now used for this class of work. They will use the same boilers and generators and equipment. The machinery will not refuse to give the same service simply because it happens to be owned by a municipality.

My past and present experience leads me to believe that municipal employees will prove as loyal to the municipality as they did to the public service corporations. Witness the building of the Panama Canal! Witness the efficiency of the American navy! Witness the efficiency of some fire departments of American cities, which do not happen to be profit earning utilities, and, therefore, are not molested by private interests. We can have the same efficiency from a municipally owned and operated utility when we remove conflicting interests. The way to remove them is to municipalize all profit-earning utilities.

Statistical experts in the employ of public utility corporations have had the audacity to insult the intelligence of the American public by deliberately comparing the receipts and expenditures of the 1,500 municipally owned electric utilities throughout the United States, with the 6,000 privately owned electric utilities operating in the large cities of this country. Their purpose was to show that the public paid more per kilowatt hour to municipally owned than to privately owned utilities, and that the cost of production was less with the privately owned than with the publicly owned. Any school boy

would know that the privately owned utilities are operating in the large cities of the country and sell much of their power and light at wholesale rates, the average of which would be much lower than the average rate received in the little hamlets and villages in which most of the 1,500 municipally owned plants are conducted. The fact is, the largest municipally owned plant in the United States is in Seattle. Cleveland is now starting a still larger municipal plant. All the other cities have averaged very small.

I want to sound a word of warning against a municipality starting a power plant for street lighting only. Any city taking the trouble to build a plant for street lighting should certainly include the sale of electrical energy for all other purposes. Otherwise the plant is lying idle one-half the time. The same real estate, the same buildings, the same executive officers, and the same poles will help to supply electrical energy for other purposes, thereby reducing the overhead cost and standby charges. While some municipal plants for street lighting only have been successful in some of the largest cities, they would have been eminently more successful had they included the sale of electrical energy for all purposes.

Municipal ownership is on the increase on the Pacific coast, as is indicated by the recent vote on the part of the citizens of Los Angeles, at which time bonds to the amount of \$6,500,000 were voted for building a 40,000 horsepower electric plant, for both street lighting and commercial light and power. It will be a much larger plant than that of any other municipality in the United States, and will ultimately be increased to a capacity of approximately 150,000 horsepower as fast as the demand for current warrants doing so. This plant is to be operated in connection with the aqueduct system recently completed.

The electric light and power business is peculiarly adapted to municipal ownership, and I believe that at an early date it will be as common as municipal ownership of domestic water. Those cities which are making thorough plans to acquire electric plants without further delay will serve their people best.

SOUTH NORWALK'S MUNICIPAL ELECTRIC WORKS

By ALBERT E. WINCHESTER,

South Norwalk, Connecticut.

This is not a brief in defense of municipal ownership, it is just a little story of an experience in that line, and why, with some thoughts that it has inspired tending toward public service regulation as above ownership. But if it will help, even as a small voice, toward bringing about a better, fairer understanding between those who operate public utilities and those who are served by them, regardless of the far lesser factor of ownership, and if it will give aid to the promotion of consistent public regulation and protection of such utilities, then its mission will have been well done.

There are at least two ways of looking at every proposition and, if it has merit, both may be worthy of fair consideration from varying aspects. No single slant of observation can carry the full weight of truth, and yet each may be faithful to its own viewpoint. Circumspection will eliminate differences which argument alone may only compound.

Prior to 1892, the electric lighting service of the progressive little city of South Norwalk, Connecticut (now the central part of the new and greater city of Norwalk), was supplied by one of the two lighting companies, located in the, then, separate municipality of older Norwalk. Competition continued for a while, but eventually a merger gave the enlarged company a monopoly of the local electric lighting business.

The street lighting service, however, which had been unreliable and frequently out of commission before, did not show improvement under the new combination. Consequently the already well grounded dissatisfaction of the South Norwalk people increased, and they also claimed that the cost was excessive. Strenuous complaints poured into the administration and were vigorously pressed upon the company; but all appeals seemed only to reach unresponsive ears. For the company, though handicapped by inadequate facilities and apparently scant finances, neither took the public into its confidence nor made any promises for betterment, but seemed to feel too fully

in control of the local field to realize the need of giving heed to the growing seriousness of the situation.

Undoubtedly a little tactfulness and reasonable conciliation then would have saved the day for it, as the progressive spirit of the community simply wanted the good reasonable service to which it was entitled. In those days the excellent public utilities commission of the state, which could now act with fairness to both sides of such an issue, had not been created.

Finally it was suggested that the city might solve the problem by building an electric lighting plant of its own. Thus municipal ownership was forced to the fore, not by choice, but as a sole alternative. This scheme, with little or no solid support at first, gradually resolved itself into a serious discussion and sides were taken. Considerable of the lighting company's stock, which it is understood had as yet yielded no dividend, was owned in South Norwalk. Consequently the city became divided on the subject and political lines gave way to those for and those against the object in view.

Conditions so continued for over a year, except that in the meantime the common council managed to appoint a committee to look into the practicability of a suitable municipal street lighting plant. This committee of unbiased men, regardless of the tense feeling both ways, went into the matter deliberately and thoroughly. They spared neither time nor the expenditure of their own money in investigation, which in the end, at almost no cost to the city resulted in a favorable report. Bitter contention was caused thereby between the opposing forces that almost brought the issue to a man-to-man affair. Families were divided and life long friends lined up against each other.

The company, still slow to grasp the situation, instead of coming forward with overtures, treated the matter as a threat that would not materialize and heaped ridicule upon it, while the service grew worse. Aside from the company, even the other chief opponents stuck to the belief that after a certain amount of excitement had been indulged in the proposition would die out.

A few sturdy citizens, however, thought otherwise—one of them, now in Congress, the Hon. Jeremiah Donovan, we call him "Jerry" now as we did then, was the people's champion. Early in 1892 a monster mass meeting was called, after a number of others that had failed to take active measures, and "Jerry" addressed the multi-

tude giving vent to his convictions in favor of the municipal plant in one of the most powerful appeals to reason in the history of the spirited little city. In summing up he showed that it was the only way open to obtain proper service under the circumstances, and urged immediate action. The result was a rousing vote for a street lighting plant, carrying an appropriation of \$22,500, to be borrowed on bonds, and the appointment of a construction committee to build it.

The company presently awoke enough to the fact that the people were in earnest to become active with injunction processes, breach of contract and other suits carrying staggering claims for damages. It even hampered the committee by endeavoring to dissuade makers of the necessary electrical apparatus from selling to the city. Thus did the company, whose short-sighted policy alone had forced its own community into municipal ownership in order to secure the adequate electrical service upon which, as a growing manufacturing and commercial center, its progress was largely dependent. As to the necessary electrical apparatus, the committee declared, if it could not buy it, it would make it. And so the cold footed manufacturers warmed up and the machinery was bought.

Regardless of threatened law-suits, predictions that the plant could not be built for the money appropriated, nor operated at the low cost that had been estimated, the committee kept right on, too busy to be swayed either by the direct and indirect ways by which the sore opposition tried to block the way, or by those, most of all, distracting head-shakings of the neither-one-thing-nor-the-other fence perchers.

The company solicited influences from a distance to aid it in crying down the public plant proposition. Bad examples were exhumed and enlarged upon; exaggerated reports of failures elsewhere were kept in evidence, but that committee of three strong men, General Nelson Taylor, a dauntless warrior of many battles and a lawyer of record; ex-Mayor Edwin Adams, a manufacturer of prominence and a man who knew not defeat when he thought he was right, and Councilman Joseph A. Volk, likewise a manufacturer and a man of set convictions that won respect, knew only how to go ahead, not backward. Only the last named is now living, and of the good work they did, their only questionable act was in choosing their engineer, but, contrary to my protests, they would accept no refusal, so I accepted. All served without other compensation than the

consciousness of doing one's best, and, with more than \$2,500 of the appropriation still untouched, on Friday, the thirteenth of October, 1892—mark well the day and date, ye superstitious,—South Norwalk blazed forth brighter than she had ever been before at night, and proclaimed her ability, under stress of circumstances, to banish the shadows of doubt, as to her capacity to penetrate dire opposition to her progress, with her own home-made brand of enlightenment.

The first shot of April 19, 1775, at Lexington, for the independence of this blessed country of ours, sounded around the world. And so the lights of South Norwalk have won her fame as an example of the cause and effect of forced municipal ownership, and a success that just had to result.

Investigators, scientists, delegations from afar have visited this little plant and have found it a plain affair, not ornamental, but full of usefulness. Those in favor and those opposed to municipal ownership have gone away both satisfied that it is just a simple business undertaking that has made good.

Within the year after South Norwalk became the first city in Connecticut, and one of New England's pioneers, to enter the municipal electric lighting business, the fear of the privately owned similar interests became so great that they were instrumental in having a law passed by the legislature to protect them from encroachments, upon their monopoly, by municipalities. With regard to fair dealing companies, this act is harmless, but under it the people have scant redress from the shortcomings of any concern inclined toward hidden unscrupulous ways which might be difficult to expose. After the passage of this act an attempt, as serious as it was ridiculous, was made to scare the South Norwalk people into a desire to dispose of their electric plant on the pretext that, not having been created under the requirements of the act, it was therefore operating illegally. When attention was directed to the fact that the plant had been completed and placed in regular service many months before the act became a law, this bug-bear faded away. This is only a single instance of the countless traps and obstructions that were laid in the path of those who fostered this infant undertaking of the people. But they had their good effect, after all, for they kept its sponsors constantly on the alert. "Eternal vigilance" was the watch-word and determination not to fear prospective defeat kept nerves and

intelligence at high tension. Thus many malicious schemes were scented before they became visible, and were quietly treated in a way that discouraged maturity.

Though previously, and for sometime afterwards, affiliated with private ownership of electrical undertakings, and always the friend of well serving privately owned public utilities, I identified myself with the people's cause in South Norwalk's instance, from the very outset, not as an advocate of municipal ownership, but because I was deeply attached to the little city whose future seemed most promising, and realized how essential good electric service was to her progress. Being thus identified with this work, there was no choice for me but to pursue it to the best of my limitations. The fact that some ill-advised friends of mine, of the opposition, threatened me and told me my future was ruined, simply clinched me to my purpose, so I just stuck to the ship. All those unpleasant feelings have died away, because only the good endures, and those who misjudged me are my good friends now for all time, I hope. Further than this purpose, I harbored a belief that civic governmental functions and good business methods could be combined with resultant public benefit.

I know of nothing better than honest private ownership of public utilities under just public regulation and protection, yet the right of the public to do its own work, if local conditions and the best public good depend upon such alternative, must be recognized.

Having thus been forced into the issue, the study of public utilities and their operation followed, and the question resolved itself more and more into the single object of best service for the public, rather than that of ownership.

To be consistent, therefore, I had to help make South Norwalk's justified venture into this branch of municipal ownership as serviceable, as businesslike and as honestly successful as I knew how. So I made a little pledge, all to myself, that I would try to stick by it until it should be entirely free from debt. Now it represents, with all its enlargements, an investment of over \$205,000, but on the eleventh day of October, 1913, it stood clear of debt; every dollar of its investment having been paid back from its net profits from commercial sales alone, just two days before it was twenty-one years old, and never one cent of taxation. Was it a "civic mistake?" A great friend of mine, connected with one of the largest companies

in the world, that supplies electricity in one of the world's largest cities, and one of the best fellows in the world, an ardent opponent of municipal ownership, has said so. Perhaps he is right. At any rate, my pledge has been filled and I am free. During the last fiscal year the little plant has also paid dividends of its profits into the municipal treasury, equal to \$1 per capita of its district of supply, for the public good. In its paid-up sinking fund for the only bonds it ever issued, of only \$42,500, are \$25,000 worth of its own city's bonds that it has been able to buy in at a bargain, by carefully watching the bond market.

And now from its reserve funds, which are building up at a nice rate, it loans money to its municipality as needed and without interest. The citizens at present are contemplating the use of its surplus profits to buy in the former city's outstanding street paving and other municipal improvement bonds, thereby reducing the municipal debt. Today, the section of the new city—the most thickly settled part, the main business center, the wealthiest district of the three that contain the densest population and most valuable industries—that has the lowest tax rate is the district that was the city of South Norwalk.

When occasionally asked to decide between public and private ownership, if given an opportunity to weigh the relative conditions, I try to return a decision that I sincerely think will produce the best result, with as careful consideration, for the future as present and past contrasting conditions will permit. In instances approaching similar conditions to those that South Norwalk had to face, it has been in favor of municipal ownership, but in many other instances it has been emphatically the other way. Cases like South Norwalk's, thanks to a growing efficiency in administration, state and city, are rare and becoming more remote.

Confiscation of rights that have been given by the public, accepted in good faith and honestly capitalized, with a reasonable expectation of a fair return for services properly rendered, is unjustified.

Even if the service deteriorates, every possible effort to induce a remedy should be resorted to before public replacement is considered. Regulation is superior to revolution, but revolution certainly is an alternative, though a grave one of final resort.

For years South Norwalk was sorely burdened with law suits, instituted by the competitive company, intended to constantly hamper and, ultimately, abolish the municipal plant. At some stages matters looked dark, indeed, and some of the more timid citizens predicted that the company—which had subsequently become a part of a great corporation with powerful influences at its call—would win and bankrupt the city, for the damages that it held over our heads were enough to make stout hearts quake. Threats to put the little plant out of business by rate cutting and injunctions against its enlargement were common. But the company was told to go ahead and, if it could beat the low scale of the municipal plant, the latter would close its doors and rest while the company's generosity lasted, as the chief aim of the municipal plant was simply to render the best service at the lowest cost, and the citizens would deem their investment in the plant a most satisfactory one if it could accomplish its purpose, through the medium of the company, without turning a wheel.

As for the law suits, the cost of which the plant, not the city, had to stand, our present Attorney General of Connecticut, Hon. John H. Light—note the coincidence of the name—then corporation counsel of South Norwalk, ably defended the city and rendered great service in helping to bring matters to a head so unexpected to the company, in all its newly acquired might, that it was glad to withdraw its suits of seven long years and treat for peace. Prior to this, at one time the company endeavored to influence the city to let it purchase its plant, on very flattering terms, or to lease it, but when the matter was brought before the people, they just voted to build the plant larger, and the company immediately applied for an injunction to stop the enlargement. But the work never stopped until the enlargement was ready and running.

All this time the city plant had been fighting for its right to live, but it kept on growing all the while and, by its success, gradually winning the support of even the citizens who had opposed it. But best of all, today, it is on friendly terms with the great broad-minded, progressive corporation that has succeeded its one time vindictive enemy, and coöperation reigns where bitter opposition used to control. Neither directly competes with the other; the municipal plant, supplying the central district of the city, old South Norwalk, and

the company carrying on a prosperous business in the large territory round about. Its rates have long since been much lower than they used to be, and its service is excellent.

But to show how progress was made we must go back some years into the trying times. By vote of the people, commercial electric lighting under a \$20,000 bond issue was added to the city's street lighting system in 1898, because the company, even after six years, had failed to properly fill the growing need for that class of service. While the addition was being built, the company put up such a fight and scared the people so badly, that the municipal plant, out of all the promises that had been made to take its service, only succeeded in obtaining six patrons to start with. But it did start, just the same, and ran at a dead loss for some months. And it was amusing to hear the comments when the few places that had the city lights were the only bright spots to be seen when the lights of the company would die down and stay dim, or go out entirely, as they frequently did. Hence oil lamps and candles, for emergency service, were the usual thing in the stores, and had forced the city to go into the commercial lighting business also.

Before the year was ended, however, the city plant had won a goodly number of patrons and gained rapidly thereafter.

As the company had made no visible effort to cater to the pressing need for commercial electric power service, the city plant encouraged it, and, after considerable experimenting, added it as a regular feature in 1901, taking on about 15 horse-power in motors to start with. The company made some arrangements to compete with the city plant in the power business, but encountering an obstruction which was discouraging to its plans, and as the city plant was much ahead in the race, it sold out, at a modest figure, to the municipal plant.

Though hotly contested by the company, each new venture of the little plant soon proved worth while. And at the present time, electricity, generated by South Norwalk's electric works, turns more wheels of industry within its territory than any other force, having on its lines motors aggregating a total of about 1200 horse-power, and the factories have increased at a healthy rate since the power service was established.

During the twenty-two years' life of this plant, the population of South Norwalk has doubled.

When the city's commercial lighting service was installed, only one residence in the city had used electricity for that purpose up to that time. No others could get the company to supply them and the total incandescent lamps then on the company's lines in South Norwalk were only about 1,500; all that the company claimed it could allow in its South Norwalk district, by reason of insufficient generating facilities. Therefore, many houses and other places that were wired and ready for it could not get the service. Today, in an area whose population is estimated at about 11,000, more than 25,000 city lights bring cheer to hundreds of homes of the prosperous and humble alike and are universal in all manner of business and other places where electric lights are used.

To meet the continually increasing demands for its service, the plant has been enlarged six times and is thirteen times its original capacity. At one time I had to undergo a rather embarrassing investigation, by a committee appointed by the mayor at the behest of some good citizens, because a belief had gained ground that I was responsible for more frequent enlargements of the plant than seemed justified. But the enlargement then needed was not only built, but the committee added to it. Other enlargements have since been built without a question.

Now past twenty-two years old, representing an investment of about \$205,000 in round numbers, originally capitalized by an issue of \$22,500 bonds for the street lighting system and a few years later by an additional issue of \$20,000 for the commercial addition, making a total actual capitalization of \$42,500, this plant has taken care of every subsequent investment with no other aid than its actual surplus profits. Not only that, it has provided a fully paid-up sinking fund for the \$42,500 bond issues, from the same source, and is getting an interest return from the sinking fund that will pay the interest on the bonds until they mature. Aside from now turning money into the local treasury for such use as the citizens may decide, it has always supplied the street lighting service on a basis of cost, so no profit has been derived from that source; therefore, by reason of that one item alone, many thousands of dollars have been saved to the taxpayers, perhaps more than the total bond issues.

The question is sometimes asked, why has South Norwalk succeeded in the municipal ownership lighting field, while some other places have not been so fortunate. In reply to this it may be truly

said that undoubtedly many cities can show results as good and possibly better. Unfortunate examples, however, are most talked about, especially by those who delight in harping upon the negative side of issues to which they are interestedly opposed, and prominence so given may be mistaken for numbers. The truth only should be accepted, not opinions, when the truth can be ascertained, and anything that cannot stand without it should fall, be it municipal ownership or anything else.

With regard to South Norwalk's case, passing over the important fact that her people have always kept themselves in touch with their civic duty, that she also has a water works system that is surpassed by none of its size in excellence of service, liberal rates and profitableness, a much older institution than the electric works, that supplies the finest filtered water—even for quenching fires—and at a pressure that requires no fire pumping engines, her good fortune so far in municipal ownership may be traced to her long record of clean administration methods, putting men of honor in office, and to a sincere effort to start right and keep right whatever she has undertaken.

From the beginning her public utilities have been protected from politics; that arch defiler of all kinds of public utilities regardless of ownership—public or private. Political manipulation has not yet been able to take root in this instance. Suffice it to say that it has attempted to sow its seeds, but, fortunately, the weeds have been recognized while tender enough to yield to the first proper "pull"—the persuasive pull of public objection.

The commissioners, in charge of the electric works, selected with care as to fitness, are elected by the people and may expect to be returned to office, if willing, as long as they carry out the will of the people. They are prohibited from holding any other municipal office and are organized just like the directors of a private enterprise. Each is skilled in mechanics and is a successful business man. Therefore, they are not at sea with the responsibility of their office.

Frederick Hunkemeier, president; Thomas Robins, treasurer; and Patrick F. Brophy, secretary; each springing from a different nationality, of differing political leanings, thus they constitute a truly *E pluribus unum* board and, consequently, very much American. Being nominated by agreement between the political parties, upon a non-partisan basis, they are free from contact with or influence by

the political machine. Even the political paths of their employees are unmasked and unknown.

As their active representative, they appoint a general superintendent, which position your humble servant has always had the honor to hold; although he, also, served as one of the first commissioners for about ten years, but resigned that office when the increasing duties of operative management finally demanded his full time and a separation from the board. He is given great liberty of action and is expected to produce good results.

Open business methods in conducting the plant and always spreading its doings upon the wings of publicity have kept it under the eye of the people. Everything about it of interest is gleaned by the local press and served up in a way that keeps all watchfully and friendly interested in its progress, its needs and prospects. When any doubt has arisen as to its doings, public investigation has been demanded by its commissioners or its superintendent, and everything has been thrown open, so that praise instead of censure has been accorded its management.

Thus suspicion, that follows insufficient knowledge, has had no soil in which to thrive, and the people feeling satisfied, have encouraged those, whom they have placed in charge of their undertaking, to do their best and good has naturally resulted. Nothing is so well guarded as that thing of undivided ownership, that stands in the open, upon which all eyes are turned.

Whether it be privately or publically owned, that public serving utility which is kept closest to those it serves inspires confidence almost without effort, and builds around itself an element of coöperative sympathetic interest that will protect it from imposition and the injustice due to ignorance and consequent suspicion, more effectually than the written law.

For years South Norwalk's electric service rates were widely accepted as the lowest in this country and until the advent of the great super-excellent modern hydro and steam turbine driven, high efficiency generating stations, which of late have served such a grand purpose in the reduction in the cost of production, which has brought remarkably low rates to the localities thus favored. But her schedule is still among the lowest, especially in the eastern section of the United States, with particular regard to the small consumers and moderate industrial requirements, to which she carefully caters,

believing that the little fellows are the ones who should be most nurtured, for they are the "acorns from which great oaks grow." Thus the South Norwalk Electric Works, though one of the smaller undertakings of its kind, and entirely dependent upon fuel for its motive power, holds its own fairly well with its greater and newer equipped contemporaries. With them it is in no wise competitive, neither does it seek antagonistic comparison with any similar undertaking, private or municipal, but desires to cooperate with all in bringing about the most public good, hence the most good for all.

South Norwalk's rates—which may be raised or lowered by the commissioners or vote of the people—are as follows:

For regular municipal service: Street lighting, from dusk to dawn every night by the standard 4,000 hour yearly schedule, per lamp per year—at estimated cost.

Arc lamps, enclosed arc or magnetite,¹ \$54.

Incandescent Mazda high efficiency lamps, not exceeding 70 watts, \$10.80.

Municipal buildings, by meter at actual cost per kilowatt hour, between 2 and 3 cents.

For commercial service: the gross monthly charge for lighting is graded from 9 cents down to 5 cents per kilowatt hour; after 500 kilowatt hours have been used, the rate continues at 5 cents during that month; the minimum monthly gross bill for lighting is 55 cents. All commercial lighting bills are subject to a discount of 10 per cent from the foregoing, if paid in 10 days.

For commercial power service: the gross monthly charge for motors, cooking, heating and all purposes, except regular lighting, is graded from 5 cents down to 3 cents per kilowatt hour; after 500 kilowatt hours have been used, the rate continues at 3 cents during that month; the minimum monthly gross bill for lighting is \$1.11; all power bills are subject to a discount of 10 per cent from the foregoing, if paid in 10 days.

No distinction in rates is made between mercantile and domestic service. Arc lamps are loaned and maintained free of cost, if desired.

Carbon incandescent lamps are supplied free.

No charges for service connections, unless difficult of access.

No charge for removing, changing or replacing meters, as desired.

No charge is made for meter testing as required.

No supplies are sold, except Mazda lamps—at less than cost, and fuses for emergency; thus in having their electrical work done and purchasing supplies, fixtures, etc., the consumers enjoy the variety and competition of a goodly number of electrical dealers and wiremen.

All electrical installations are required by ordinance to be inspected by and approved by a municipal inspector, independent of the Electric Works.

¹The arc lamps have been recently extensively superseded by Mazda lamps at shorter intervals with marked improvement, and an elaborate scheme of ornamental street lighting is under consideration.

No contracts are required for the supplying of lighting or power; any consumer is free to use the service or not, at will, after being connected, and simply pays for what has been used.

There are no conditional charges, based upon special service, periodical conditions, kilowatt capacity, nor for break-down service; whenever the service is turned off, the cost to the consumer stops, and if no service at all is used, only the nominal monthly minimum charge is required as long as the meter is retained, to cover its investment, reading, maintenance of the service, etc.

An advance payment, about sufficient for one month's service, or a suitable endorsement, is required from patrons who do not own local real estate. This payment is subject to return upon closing the account, unless needed for arrearage.

No person, high or low, receives free service. Even the municipality pays the Electric Works for value received and in turn collects, at full rates, for the considerable water service used by the Electric Works and for any other service involving expense, so rendered; except that no tax is required in pursuance of a state law, but the fact that the street lighting and other municipal service, supplied by the plant, are rendered on the basis of cost, the municipality is thus far more than compensated for any loss of taxes.

Free lighting, however, is donated temporarily to civic and other functions for the public good and charitable purposes.

The Electric Works operates and maintains the municipal fire alarm and police telegraph systems, at actual cost for labor and material, and has had full supervision of same for many years, including the announcing of standard time on the fire bells at noon and 3 p.m. daily; the latter serving as a reminder of evening appointments, entertainments, etc.

This department has for many years also exercised a general supervision and regulation, in behalf of the city, relative to rights of way, locations of poles, wires, conduits, etc., of all telegraph, telephone, street railways, electric lighting and power companies, within the municipal area. Such service has always been rendered without cost to either the city or the companies, and has been the continuous means of maintaining good feelings and coöperation between all concerned, by seeing that all were served with due consideration for each other's rights, and with due regard for the public.

The electric works owns the local public weighing scales for vehicles, etc., and acts as weigher for a charge of 5 cents per load.

A majority of South Norwalk's electric lighted homes pay less than \$18 per year, and many under \$10. Modest homes using the service very extensively.

As for power, many budding factories have monthly bills of about \$10 or under, and instances under \$5 are not unusual. About \$1 per day is a fair rate for some quite important industries.

In 1908 the thriving suburb of East Norwalk—now an important section of the new city of Norwalk—established a municipal electric system of its own for both street lighting and commercial service. Up to the present this

plant has purchased all of its electricity from the South Norwalk Electric Works, but its growth has been such that it is now installing a generating station of its own and will soon be self contained.

The motive power that generates South Norwalk's "juice" consists of coal burning boilers, simple steam engines and Diesel fuel oil engines. The steam equipment, though always ready for immediate service, serves mostly as an auxiliary to take up sudden loads, to carry peak loads and for emergency service, while the oil engines carry the bulk of the load. All current is direct, as the area of supply is very densely populated and permanently confined by its charter to a territory small enough for such current to render the best and most economic service.

Without regard as to the right or wrong of municipal ownership of public utilities, its growth in this country and the interest it has aroused, in spite of the difficulties it has had to encounter, show it to be a live issue. Just a glance at the statistics on this subject is quite indicative of this fact.

For instance municipal ownership electric lighting began in this country in 1881 with a single plant, but according to the 1912 census there were 1,562 listed and the actual number now is estimated at more than 1,600. This represents a remarkable growth in a comparatively new field of municipal ownership, especially in view of the closely matched extremes of favor and disfavor that have attended it. Also that it started almost with the advent of electricity as a practical means of illumination. The statistics credit Ohio as being the banner state in municipal electric plants with its 118; Michigan has 108, Minnesota 104, Illinois 99, Georgia 84, Kansas 82, Wisconsin 78, Indiana 71, Missouri 65, Oklahoma 63, New York 49, North Carolina 48, Mississippi 47, Pennsylvania 45, Iowa 64, Nebraska 62; all the other states have varying numbers from 1 to 35, except Arizona and New Mexico, which are not credited with any. In Great Britain, more than half of the public service electric plants are municipally owned.

Generally speaking, from having visited and closely studied many of the municipally and privately owned electricity undertakings of England, Scotland and Ireland, those municipally owned impressed me as eminently successful and lost no credit in comparison with similar privately owned undertakings. Both showed marked excellence in management and equipment in the aggregate.

If it is a fact that the prevailing methods of municipal administration in our country are not as favorable to efficient operation of

municipally owned commercial public utilities as those of Europe, it is a reflection upon our fitness to undertake such responsibilities, that is neither creditable to our citizenship nor those who manage our public affairs; but it is not a fair argument against the principle of municipal ownership. Great Britain and most of the other European countries have weathered far more trying civic conditions than we have had or are likely to have, and have remedied the evils by splendid reforms, to such an extent that some of their standards of municipal administration are worthy of emulation.

Questionable politics is as detrimental to privately owned public utility institutions as it is to the municipally owned. To this cause may be traced very largely the advent of many municipal plants. For what is more in conflict with an endeavor to keep municipal administrations clean and efficient, than a great private corporation that trades with politicians?

Too much emphasis cannot be placed on the fact that public utilities, under both private and municipal ownership, offer great temptation to that element of politicians who, like birds of passage, prey greedily today upon those things which they fear may be beyond their reach tomorrow. Such men too often regard a nice public utility as a convenient sort of political patronage asset. Its economic benefit to the community concerns them as little as does its actual ownership, so long as it can be utilized for personal and party advantage. The main thing is: what is there in it for the time being that will come in handy to them?

Therefore, no public utility should ever be established under municipal ownership, unless it is to be placed above the domination of politicians and wholly under the charge of able men of known integrity. To them should be given reasonable latitude of action and they should then be held responsible for proper results, just the same as the directorate of a private corporation. Such men should hold office, wholly independent of political dictation, as long as they make good, and never more than a minority representation should be replaced at a time, so that experienced men will always be in action.

Periodic change in office is one of the greatest drawbacks to efficient and economic public administration. We simply wouldn't stand it in private business affairs. Thus men who have been educated at public expense are too often thrust out just as they have

learned how to do their work, and other learners succeed them, very much on the my-turn-next plan of our school days, which was never intended for the serious business of manly years.

Until we have instituted needed reforms in our ways of carrying on the public's work, municipal ownership, to replace private ownership on any extended scale, should be considered most carefully before its adoption even as a final alternative. Otherwise a simple change of ownership may result not only in a swopping of evils, but plunge communities into debt, litigation and responsibilities, which they may be unfit to bear; not to mention the ruination of investments.

Before municipal ownership as a commercial business is decided upon, it should be determined without prejudice, by unbiased trustworthy persons, whether or not it is the best alternative. Neither fancied reasons, theories, snap-shot judgment, spite nor a personal grouch, should be allowed in evidence. Both public and private interests have paid heavy toll, and will continue to do so, because people do things collectively under lack of personal responsibility and unwise influences, from which, as individuals, they would shrink. Majorities may be wrong.

Therefore, though it may be proven that a privately owned public utility has failed in its obligations to the extent that public ownership seems to be the only remedy, even then every reasonable means should be used to induce and aid the local concern to meet its just requirements. It is wiser to patiently pursue a determination to improve existing methods, than to multiply public burdens and responsibilities unnecessarily; and only communities that can thus consider this matter are fit to be trusted with extended responsibilities.

The municipalizing of any form of money earning public utility carries with it great possibilities for good or evil. "What is medicine for one is poison for another," was never more applicable than to municipal ownership. Every community stands alone and must meet the issue according to the merits of its own peculiar conditions and expectations.

The possibility for any municipality to have some time a municipally owned public utility is ever in the offing, as a final resort, and should be so considered. The public utilities commissions or equivalent bodies, in most states, stand ready to act intelligently upon this issue. This being so, all that is needed is a just cause

and a unity of purpose to bring about the regulation or the alternative.

Community ownership is not new, it goes back to the time when man grasped his reason, as a staff, and raised upon his hind legs above the other animals. Realizing that he needed protection and feeling the strength of numbers, he became a social being, and the community was established. The community discovered, and comprehending its value to all, set aside a spring for the use of its people, and we have the embryo public water works. At night, so that they might not be surprised by the enemy, for greater convenience in moving about and to prevent mistaking each other in the dark for a foe, they set up a beacon and the watchers—the first of the “finest”—kept it alight.

Thus came the public lighting plant. Time has simply added refinements. While so busy giving away valuable public service franchises, we Americans seem to have forgotten that community ownership was all there was for us to rely upon at one time for the few crude public conveniences and necessities that we jointly enjoyed.

Private ownership is comparatively new. Under it wonderful improvements have been developed for our common comfort and progress, that otherwise, very probably, might not have arrived so soon. We owe it deep gratitude. If it has sometimes given short measure, have we been as fair of measurement as we should have been—We, the public? Have we not ourselves to blame for a laxity that has tempted those who have served us, to be lax? It is mighty nice to be waited on, but if we indulge too much in such luxury, we become less handy in waiting on ourselves. Thus public ownership has in a measure slipped away from us, for a good and natural reason, so quietly that we haven't realized it. If a servant assumes the mastership, whose fault is it? The master's or the servant's?

To say that either private or public ownership is most wrong and that only one is most right, because the advocate of one or the other says so, is about as reasonable as for the follower of one faith to say that his is the only road to heaven. All things gain or lose by contrast. The glorious light of day would be bare of glory, were it not for the blackness of night. And the enchanting peaceful restfulness of the mystic night would be hideous were it not for the glare and toil and blare of the noisome day.

Why not submit to the fact that both private and municipal

ownership survive, and each having honest adherents indicate that both have legitimate fields to fill. We are to have both according to our requirement, actual or apparent, until the need of one or the other is proven by results.

The people are the paymasters and they generally get what the law of supply and demand, that they have created, offers them. If they want something better, good mastership demands that they devote their energies and intelligence to the cause of just regulation of, and protection to, the interests that they have created to serve them, and not to everlasting differing views as to whether private or public ownership is best, with each side of the issue hostile to the other. Good service is, or should be, the aim of each.

THE HYDRO-ELECTRIC SYSTEM IN TORONTO

BY H. C. HOCKEN,

Mayor of Toronto.

The city of Toronto has a municipally owned and operated electric light and power enterprise, known as the hydro-electric system of Toronto. Toronto is one of twenty municipalities in the province of Ontario which in coöperation with the provincial government have installed local distribution systems, which are supplied with power from Niagara Falls by the hydro-electric power commission of Ontario.

Public interest in the matter of utilizing Niagara Falls for the generation of electric power took formal expression in the year 1900, when a committee was appointed by the Toronto board of trade to investigate the question. The report of that committee stimulated public interest, and in the year 1902, many public meetings were held in the province of Ontario, to consider the best means of utilizing these resources.

The Canadian Manufacturers' Association and boards of trade throughout the province lent powerful support to the movement. In 1903 an act was passed by the Ontario legislature authorizing municipalities to inquire into, and if thought desirable, to establish municipal light and power works. Under the authority of that act a commission was appointed on behalf of the municipalities of Toronto, London, Brantford, Stratford, Woodstock, Ingersoll and Guelph, to carry out such an inquiry. This commission issued a report on the 28th of March, 1906, setting forth for the first time a reliable and reasoned exposition of the great value of Niagara Falls to this province as a source of electric light and power.

Subsequently, a further commission was appointed by the Ontario government to conduct inquiries on a larger scale into the question of utilizing in different districts throughout the province the water powers with which it abounds. A series of valuable reports was published by the commission, after prolonged and careful inquiries.

As a result, the hydro-electric power commission of Ontario was created by statute in the beginning of 1907, charged with the duty

of establishing for the benefit of the municipalities of the province all desirable generation works and transmission lines. This commission was originally composed of Sir Adam Beck, M.P.P. of London, Chairman; the Hon. J. S. Hendrie, M.P.P. of Hamilton; and W. K. McNaught, M.P.P. of Toronto; all highly capable, high grade and experienced business men. Subsequently the Hon. Mr. Hendrie was appointed lieutenant-governor of Ontario, and his place on the commission filled by the Hon. I. B. Lucas, provincial treasurer. The commission has constructed 110,000 volt transmission lines from Niagara Falls, via Hamilton to London in the West and to Toronto in the East, designed to serve the needs of the municipalities above mentioned and others contiguous thereto and is now constructing a line to Windsor. It has entered into a contract for the purchase at low rates of electric current from one of the generating companies now established at Niagara Falls, which it transmits over its own line to the various participating municipalities, each of which assumes responsibility for the construction and operation of its own local distributing system. The current is supplied to the municipal participants at cost, and they distribute it at cost among their own power and light consumers.

In coöperation with the governmental commission, the city of Toronto has constructed an independent civic distribution plant, designed to supply the city, the manufacturers and the citizens with electric light and power at cost. By act of the legislature, the administration of the civic distribution plant has been placed in the hands of a commission, now composed of Mr. P. W. Ellis (chairman); H. C. Hocken, the mayor of the city, and Mr. R. G. Black, electrical engineer.

The city of Toronto, being the commercial and manufacturing as well as the political capital of Ontario, is necessarily greatly interested in the question of maintaining its manufacturing supremacy.

Supported by an overwhelming body of public opinion, it decided in the year 1908 to build its own distributing plant to supply electric light and power at cost to the corporation services and to the manufacturers and the general body of citizens. A brief description of Toronto's civic plant and its progress to date may be of interest:

The physical plant consists of a terminal station and equipment at Strachan Avenue, where delivery is taken of the current

from the government commission at 110,000 volts and stepped down to 13,200 volts; a system of 13,200 volt sub-station feeders from the terminal station; eight principal sub-stations and necessary equipment located at carefully selected points throughout the city; a system of medium voltage city feeders running out of the sub-stations and covering the entire city area; secondary lines on every street in the city with pole lines projected for both sides of the streets; a 250-500 volt direct current system limited to a particular downtown area; and a complete equipment for lighting the grounds and buildings of the Canadian national exhibition and for supplying the needs of exhibitors.

The transformers installed and projected for the terminal station have a capacity of 33,500 h.p. while those installed and projected in the various permanent and temporary sub-stations have a capacity of 60,000 h.p.

The total estimated capital cost of the enlarged plant roughly described was \$4,500,000, exclusive of the cost of the terminal station and its equipment, which were erected at the expense of the provincial hydro-electric commission. The rate-payers have authorized the issue of debentures by the city of Toronto to the extent of \$4,950,000 for the purpose of meeting the capital expenditure involved. The debentures mature on the 1st of July, 1948, bear interest at the rate of four per cent per annum, and are issued subject to the condition that annual sinking fund payments adequate to their retiral at maturity shall be maintained. The rapid extension of the business of the system has rendered necessary an additional issue of \$700,000 and a further issue of \$1,000,000 is to follow in the near future, making in all \$6,200,000.

Some idea of the difference between the lines upon which the present plant is designed, and those upon which the first plant was designed, may be gathered from the fact that the first plant was estimated to cost \$2,500,000.

Apart from the municipal services there are four scales of rates in force, viz:—

(1) *For A. C. Residence Service.* A charge is made herein of 4 cents per month for each 100 square feet of main floor area, with a unit charge of 3 cents per kilowatt hour subject to 10 per cent discount for prompt monthly payment. These rates represent a

reduction of approximately 40 per cent from the old rates of the commercial competing company.

(2) *For A. C. Commercial Lighting Service.* A unit charge is made herein of 8 cents per kilowatt hour for the first 30 hours of maximum demand, with 3 cents per kilowatt hour for the excess monthly service, subject to a minimum charge of \$1 net per month and to discounts for prompt monthly payment of 10 per cent, 15 per cent and 20 per cent respectively, according as a one, three or five year contract may be entered into. These rates approximate 50 per cent below the old rates of the commercial competing company.

(3) *For A. C. Power Service.* A charge is made herein for the ordinary small manufacturers' service of \$1.35 per horse power per month for 10 horse power whether or not the current is used, plus \$1 per horse power per month for the excess consumption, plus a unit charge of $1\frac{1}{2}$ cents per kilowatt hour for the first 50 hours' service, plus 1 cent per kilowatt hour for the next 50 hours' service, plus $\frac{1}{3}$ cent per kilowatt hour for all excess service subject to discounts for prompt monthly payment and according to duration of contract, as above mentioned. These rates approximate 50 per cent below the old rate of the commercial competing company.

(4) *For Direct Current Power Service.* The rates charged herein are the same as for alternating current power service, with the exception that the unit rate per kilowatt hour is $2\frac{1}{2}$ cents for the first 50 hours' service, $1\frac{1}{2}$ cents for the next 50 hours' service, and $\frac{3}{4}$ cent for the excess service, subject to the same discounts and general conditions as the foregoing. These rates represent an approximate reduction of $33\frac{1}{3}$ cents below the old rates of the commercial competing company.

It is obvious, of course, that properly constructed rates must provide:—

- (1) For the whole of the operating expenses involved.
- (2) For the depreciation of the capital investment due to wear and tear and to the progress of invention; and
- (3) For the requirements of the sinking fund.

A commercial company always raises a large part, when not the whole, of the funds required to provide for construction expenditures by means of perpetual share capital. As the moneys so raised do not require to be returned to the shareholders, it is not necessary

in such cases to load the rates with sinking fund charges, designed to repay the capital. In the case, however, of a municipal undertaking, the conditions are entirely different. The undertaking has no capital as such. It is built out of the proceeds of debentures which require to be paid off at maturity. Unless the rates are loaded with an adequate sinking fund charge, the accumulation of which extinguishes the debt at maturity, it would require to be paid off at the expense of the rate-payers at large. It is sometimes suggested that to load the rates not only with an adequate allowance for the sinking fund obligations, but also with proper allowance for depreciation, is unfair and that such policy would impose such a burden upon any undertaking submitted to it that it would necessarily lead to disaster. But depreciation is a grim reality. No undertaking, whether commercial or municipal, can escape it. The world goes on improving its instruments and methods of production, rendering obsolete in consequence antecedent methods and instruments without regard to individual wishes. Wear and tear operate continuously upon all apparatus subjected to its influence, without regard to municipal resolutions or to doctrinaire theories.

The results so far have been entirely satisfactory. In the initial period of operations we had perhaps more than the usual difficulties. These proceeded from a keen and for a time it seemed implacable antagonism of vested interests who rightly or wrongly believed that they had a moral grievance against all who supported the municipal venture. The city offered to purchase the private company at a premium of 25 per cent on the stock, but the owners refused to sell, preferring to dispose of the property to another private syndicate. The futility of opposition, however, against a resolute will on the part of the public gradually made itself apparent and those special difficulties are now matters of ancient history.

At the beginning of October, 1914, we had approximately 30,000 completed services with a connected load of upwards of 80,000 horse power. The total current supplied to all consumers during the nine months ending September 30 was over sixty million kilowatt hours.

The quality and stability of the government transmission line and of the local distributing plant have been proved to be of the highest order. The power and light users of the Toronto municipal system have, therefore, enjoyed a continuous high grade service, and the result of this continuous high grade service is being shown

in a constant accession of business far beyond the expectations of the commissioners.

The street lighting has been so greatly improved that it is unthinkable that the city would ever tolerate again the old conditions. Toronto has an 80 candle lamp every 110 feet both sides of every street. Concrete poles of great durability and of pleasing design have replaced throughout the major part of the city the old unsightly wooden poles. The old arc lamps, suspended high overhead and casting deep and often treacherous shadows, have given place to modern tungsten lamps, with a soft and well diffused light, free of the shadows of the old. Over 40,000 of these lamps have been installed on the city streets, the main thoroughfares being lighted with well-designed cluster groups. As a result the streets of the city are beautifully lighted, and it is doubtful whether when the work is finished there will be any city on the continent as well lighted.

The financial results are no less gratifying. It was anticipated that the period of initial loss which every business has to go through while it is establishing itself in the confidence of its customers and building up its trade, would have lasted for a matter of two or three years. As a matter of fact, we ended the first full year of operation with a net surplus of \$13,555.41; the operations of the second year yielded a surplus of \$34,575; and we have every reason to anticipate for the present year, after providing interest, depreciation and sinking fund, a surplus of over \$100,000. Owing to the technical requirements of the first appropriation it has been necessary to pay sinking fund over the period of construction and the surpluses to date have been set aside for this purpose, which will likely be accomplished by the end of the present year.

The competitive effect of the establishment of the civic plant has not been destructive as was freely predicted at the time of its inception by its commercial competitors. The fact of the matter is that the potentialities of the power and light business are so great that few companies enjoying a monopoly thereof are alive to their possibilities. The rates of the competing commercial company in this city have been reduced to meet our own. There has been a very great advance in the quality of the service given to the citizens and a great increase in the activity and intelligence with which business is cultivated. The cheapening of the rates and the exten-

sion of the uses to which electricity is now put are having the effect of greatly increasing its total sale in this city, and province.

That the system is serving the masses of the people is proved by the fact that at the end of the year 1913 we had on our lines 500 three-roomed houses, nearly 1,000 four-roomed houses, the same number of five-roomed houses and nearly 5,000 six-roomed houses. At that time there were approximately 1,500 customers whose bills were, for at least eight months of the year, less than 50 cents per month. A further evidence of the increased use of electricity for domestic purposes is shown in the large number of electric appliances we have succeeded in selling in the "Hydro-Electric Shop." Our present results indicate that during the year 1914 we shall sell over 6,000 irons and very large numbers of toasters, heaters, vacuum cleaners, coffee percolators, washing machines, fans, etc.

The establishment of the civic system has not injured the privately owned company. But the use of electric power has increased enormously since the municipal system began operations. In 1910 the connected load of the Toronto Electric Light Company was 42,500 k.w., now the connected load of the two systems is 127,000 k.w., three times as much as it was five years ago. The result is that Toronto has the lowest average rate of any city in the world of 500,000 population or over. The electrical journal, quoted recently in the *Literary Digest*, gives these figures:

London, England.....	4.50
New York.....	5.20
Paris.....	10.20
Berlin.....	3.40
Hamburg.....	6.16
Chicago.....	2.18
Toronto.....	1.71

The effect of these low rates is that every new house that is built in the city of Toronto, no matter how small, is wired for electric light. The people find that they can enjoy this luxury at a price that, at least, does not exceed the price of gas, so that the low rates that are in operation, and which will be reduced in 1915 at least 10 per cent, bring electric current within the means of the humblest of householders of the city. One other feature of the municipal enterprise is the satisfactory results to those who are employed in operating the system. Without any dispute with the Union, wages

have been increased, not only on the civic system, but on privately owned systems, the latter being compelled to follow the public owned enterprise. An increase of wages was granted to the men this year upon a basis which must be considered satisfactory. The commissioners when approached by the men realized that if their requests were granted without the most careful consideration, they might be charged with unduly increasing the cost of labor to the enterprise. They, therefore, applied for a board of conciliation, which was appointed by the federal government. This board after taking evidence, gave a judgment fixing what they declared to be fair and equitable wages and upon this authority the local commission acted. It will be seen, therefore, that the question of wages has been adjusted by an impartial authority and by this means the greatest harmony maintained between the commission acting for the people at large and those who are employed upon the system.

SOME LIMITATIONS AND OBJECTIONS TO MUNICIPAL OWNERSHIP

BY CLARKE M. ROSECRANTZ,

Of General Counsel, The New York City Milwaukee Electric Railway and Light Company.

I understand that the purpose of this conference is to establish a bureau which will supply municipalities with information and statistics concerning the cost of the operation of public utilities.

While I have had no conferences with the managers of public utilities privately owned, I think I am safe in saying that they will welcome the organization of such a bureau, providing those in charge of it are non-partisan and report all information concerning the operation of municipally operated public utilities as well as those operated by private corporations, and will secure as accurate data concerning the cost of operation of municipally owned plants as it can secure as to the cost of operating privately owned plants or utilities. That they will have difficulty in securing such information as to municipally owned utilities, I think may be predicted with certainty. That has been the experience of everyone with whom I have had occasion to discuss the matter, and I think it is the experience of all public utility commissions.

It has been the experience of the Railroad Commission of Wisconsin as is evidenced by the following quotation from the sixth annual report of that commission, published under date of June 30, 1912 (page 148):

One problem that has been very hard to handle is the adjustment of municipal reports. It is the purpose of the uniform classification to make utilities of the same class, regardless of form of ownership, comparable with one another. In bringing the accounting procedure of municipal utilities into line with these uniform rules many more obstacles and difficulties have been met with than in the case of the private plants.

The commission has taken the attitude that a municipal plant should report earnings for services furnished by one department to another in the same way as though the utility stood apart from the general city administration. Thus, hydrant rentals should be reported as an earning to a municipal plant, even though as some municipal clerks have said, "it is only taking something from one pocket and putting it into another." The fact remains

that the utility has furnished the service and has earned a return for it, regardless of whether or not it actually has any more cash on hand to show for it. Unless such interdepartmental transactions are reported no fair comparisons can be made between privately and municipally owned plants.

The fault does not necessarily lie with the administration of the municipal utilities themselves, but should rather be attributed to the weaknesses in the entire accounting method which prevails in many of our cities. It is a difficult task to accomplish any permanent advancement or improvement in the accounting procedure of a municipal utility when the entire municipal system coupled up with that city's administration may be unscientific and inadequate. Just as soon as any attempt is made to regulate the utility end of it, the necessity of reforming the entire municipal accounting procedure becomes obvious. If it is the city's practice to sever all transactions with the general fund and to make little or no attempt to show operations of departments as separate activities, it is difficult to require that the procedure affecting the utility be revised without adjusting the other operations so that they are harmonious throughout.

The commission has pointed out to the municipal plant the importance of segregating their transactions as far as possible from general city business. It is to be hoped that coöperation with other state departments will be able to arouse the cities to realize the inadequacy of much of the present municipal accounting and to institute reforms in municipal accounts which will show separately the operations of each department of the city.

Such a bureau, operated as I have suggested, would perform a great public service and would, I am satisfied, go a long way towards solving the question of whether public utilities can be as efficiently and economically operated by the public as they can be under private management.

The attitude to be taken by the mayors of various American cities, with respect to the policy to be pursued by municipalities toward the public utilities, is of great moment to the public. I assume that those present at this conference approach the consideration of this great problem with an open mind, with a desire to seek and learn the truth; that they do not approach it armed with prejudice and a determination that no argument, no fact shall change their views. The question is really whether public utilities shall be operated by the municipalities in which they are located or shall be operated by private owners, subject to public control and regulation.

As I have not had the advantage of knowing what views Congressman Crosser will press to substantiate the reasonableness of his position and his belief that all public utilities should be oper-

ated by municipalities rather than by private owners, I am compelled, in anticipating the points he may make in support of his position, to rely on what I could gather from his questions at the hearing on the bill which he introduced in Congress last winter for the acquisition of street railways in the District of Columbia by the United States Government, at which hearing I had the honor and pleasure to appear.

The subject is so large that I feel seriously handicapped in discussing it, owing to the extremely limited time allotted to me; and in view of that limited time, I cannot bring to your attention any statistics, and cannot analyze for you the statistical reports showing the result of the operation of publicly owned railroads and utilities in Europe, in Canada and in the United States. I am obliged to refrain from discussing each of the advantages which it is claimed will result from municipal ownership and operation of public utilities. I can deal with but some of them and in but a most general way.

Of the usual reasons advanced for the operation of public utilities by municipalities is that utilities will thereby be removed from politics and that public utilities are now in politics and control municipal councils, and thereby secure to themselves special privileges of great value and thwart the public in its efforts to secure proper service at reasonable rates. Public utilities have been in politics. They did not go into politics from choice—they were obliged to go into politics to prevent their property from being wrested from them or plunged into bankruptcy by reason of the unfair and unjust demands made by the councils. The members of the councils making these demands claimed that they were representing the people when in fact they were representing themselves, seeking to remain in office, and to that end sought to impose great burdens and obligations upon the utilities so that they could point to such an achievement as a reason for their advancement to a higher official position or to being returned to the one they then occupied.

Numerous instances can be cited and proved by evidence competent in a court of law where municipal councils compelled public utilities to enter into politics in order to save their corporate life and property, or compelled them to pay large sums of money for a privilege which they should not have been compelled to seek, but which the municipality should not only have offered but should have insisted upon the utilities' accepting. By the imposition of

burdens upon public utilities, the members of councils claim they have done something for the public. That they have thereby worked harm to the public would seem clear—for every unnecessary burden placed upon a utility either lessens the utility's ability to afford better service, make extensions or reduce rates.

I can cite many instances which I know to be true—one or two may be sufficient—where councils have acted contrary to the best interests of the public.

A few years ago a certain railroad company desired to lay an additional track in a city. This track would not afford the railroad any additional revenue, and the right to lay it carried with it the obligation to expend some money—that is, add to its capital investment. It desired to lay this additional track so that it might more speedily and effectively serve the public. An ordinance was introduced, hearings were had on it before the railroad committee of the common council and, so that they all might understand the situation, a view was taken and counsel for the railroad company requested the members to come to his office so that he might explain the situation in detail upon large blue prints which had been prepared by the company's engineers, and give them a clearer conception of the location and purpose of the track and the result to be attained by its construction and operation. One of the members of that committee said to another "What do we want of blue prints? What we want to see is green prints!" The company refused to be black-mailed; the committee reported adversely to the ordinance and it was defeated.

In 1906 the Railroad Commission of Wisconsin, after a full investigation, handed down a decision in which it was stated that the Milwaukee Electric Railway and Light Company, in order to properly and efficiently serve the public, should be granted additional franchises. The company promptly made application for the franchises, but the common council for years persistently refused to grant them, all the time belaboring the company for not properly serving the public; and to this day, but few of the franchises mentioned in that decision have been granted.

In most cities the result of any election is dependent upon the position taken by a very small proportion of the total vote cast. Utilities employ large numbers of men. They are no different from other men. They naturally desire an increase in wages and a short-

ening of hours of service. The man or men running for public office in a city where the utilities are municipally owned, who gives the greatest assurance that either or both of these desires will be realized, will be elected. It will be to the interest of the employees to enter and remain in politics, and they will be able in almost all municipalities, to control the result of any election. Municipally owned utilities will bring them and their employees into politics instead of keeping them out.

It is also claimed that under municipal operation rates for service rendered will be much lower than where the utilities are operated by private corporations. This is stated broadly and positively by all the advocates of municipal ownership; but I have yet to find any instances where an examination of their accounts will show that the rates have been less without showing a deficit when proper charges incident to the cost of service were made.

What makes for success in the operation of any business enterprise, and a utility is a business enterprise? Does it not depend upon the skill, knowledge and experience of the men in charge, taken together with an opportunity for a continuity of policy? The man who operates any business enterprise cheaply and successfully is the man who has given it years of study and who brings to bear upon each new problem the result of his study and experience. In other countries, where the government is more stable, where it is bureaucratic instead of democratic in character, and where the men in charge of public utilities remain in office for long periods of time, the results do not show that the utilities are better managed—more economically managed—than similar utilities in the same countries which were under private control.

The rates charged by any municipally operated utility must be sufficient to pay for the cost of service. If they are not, then the non-users must make up the deficit and their proportion of that deficit will be included in their tax bills. If the public operation of utility companies is likely to be successful, we ought to be able to find without any difficulty that those which have been for many years, owned and operated by municipalities, have been economically and efficiently operated. The history of our city management shows that the contrary is the fact.

I appreciate that many cities claim that certain municipally operated public utilities have been operated satisfactorily to the

public and were operated much more economically than under private ownership and at a less cost to the users. Income accounts and balance sheets are presented to sustain that claim, but any proper examination of those to which I have had access with a proper allocation of items shows that, instead of being operated at a profit, they were operated at a loss.

It is quite customary for people advocating the adoption of any new policy to point to results in other countries of the policy sought to be adopted—usually so remote and under such conditions that it is difficult, if not impossible, to make a fair comparison. We are able to know the result of municipal operation of some public utilities by cities near at hand and cities where the administrators of public affairs have a longer tenure of office than they do in this democratic country.

The city of Edmonton, Alberta, Canada, having a population of about 90,000, believing that municipal ownership of public utilities was wise, has owned and operated its public utilities for a period of years. It did not purchase existing utilities but built new ones, and the *Official Gazette*, which is published by authority of the municipal council of that city, on April 2, 1914, pointed out that its railway system had a deficit from operation of over \$400,000; its telephone system, a deficit of over \$100,000; and its waterworks, a deficit of \$100,000. In the *Official Gazette* of Edmonton, under date of April 30, 1913, Mr. John Chalmers, commissioner of operation, stated:

Prior to 1913, no provision had been made for depreciation or replacements, and as much of the plant and properties will not be useful for the period covered by the lifetime of the bonds, particularly as some of the early issues were for forty years, and also that equipment must be superseded by more improved types, it was decided to create a fund to take care of this proper obligation.

In another part of his report he stated:

Our present financial condition is not exceptional to all other street railways west of Winnipeg. Systems in Saskatoon, Brandon, Regina, Lethbridge and Calgary, all equipped with modern apparatus, operating under the same rates of power charges, are showing deficits. Lethbridge is reported to have lost \$30,000 the last year; Brandon is losing \$100 a day.

Extensions were made into sparsely settled territory where they could not pay even a small fraction of the operating cost.

The annual report of the city engineers of Edmonton for 1913 says:

There has been a heavy loss in the operation of this department for the fourteen months amounting to \$129,636 and after paying the newly established reserve for depreciation, the loss has been considerably increased and the total deficit to date is over \$405,394.

A little over two years ago the city of Winnipeg established a municipal lighting system. It was able to secure its power from a hydro-electric plant, the cost of which was extremely low. After two years of operation, they have a large deficit although their accounts as filed originally with the public utility commission show that in the second year of operation they had made up a large portion of the deficit resulting from the first year's operation. An analysis of that account by the commissioner showed that they had neglected—and this is a common practice by all municipally operated plants—to make a proper charge for depreciation. The commissioner directed that the company should charge to depreciation the tiny sum of \$223,000. With this charge—which would be such a charge as a privately operated plant would be required to make—the operation showed a still greater deficit. In the endeavor to show that it was operated at a profit, no portion of the salary of the comptroller who has charge of the electric plant, was charged against the cost of operation. His salary was charged to the general expense. No charges were made for injuries and damages, and it appears that one item, amounting to \$5,000 for the death of an employee, was charged to capital account; and when it was suggested by the public utility commission that this charge might properly belong to operation, they offered to charge half to operation and half to capital account.

The municipal water plant in the city of Winnipeg is operated with electric energy secured from the municipal plant. Formerly it purchased it from a private corporation, and it now pays more for the same current than it formerly paid the private company. The municipal plant in Winnipeg is dependent entirely upon its hydro-electric plant and a transmission line which is subject to the action of the elements. A severe storm might at any time leave that city without electric energy for light or power or for pumping service for fire protection. It has been suggested that it should construct a steam plant for emergency service; but this plan, which

almost anyone would say was wise, has not been adopted, but instead, another high-tension transmission line at a cost of more than \$1,000,000 is to be constructed. Just how it is conceived that a storm might wreck one transmission line and leave the other, constructed in close proximity to it, so that the city of Winnipeg or those using the energy from the municipal plant would not be affected, is difficult to understand.

The city of Duluth owns and operates its own water plant and system. Great claims are made concerning economy of operation. In one of the Duluth papers it was recently stated that in order to maintain the low rate charged for water, a tax is imposed upon all property. This of course is in the nature of a subsidy. A private corporation if it received a subsidy from taxpayers might of course give lower rates than it could otherwise. So, too, it appears from statements made in the Duluth papers, published within the last few months, that the entire water supply of the city of Duluth is brought by one main which is in bad physical condition. Think of what would happen to a private corporation if it left a city—no matter how small—dependent for its water supply and fire protection upon the continued efficiency of one main! If that fact were known, the executive officers of such a company would be obliged to leave the city between two days.

San Francisco has recently constructed a municipal railway about fifteen miles in length, and that is pointed to with great pride by those in favor of municipal ownership. That company does not receive transfers from other lines, charges a straight five-cent fare and enjoys a position which gives to it the heaviest traffic of any line operated in that city. I think we may safely concede that if the city of New York owned the line up Broadway and accepted no transfers it might pay high wages and give utopian service and set aside a large sum by way of profits. But that would not be a fair criterion by which to judge a line on Avenue A or Avenue B or extending through a sparsely settled district.

In the city of Athens, Ohio, after eleven years of municipal operation, the people—at the election in 1914—by a most decisive vote decided to turn over the electric lighting plant to a private corporation for operation, as the municipality had been unable to operate it properly.

In September of this year the city of Hanover, Kansas, decided

to turn over the operation of its municipal lighting plant to a private corporation, the city's operation having been unsatisfactory and non-economical.

The people of the city of Chariton, Iowa, at a special election, voted to sell the municipal plant to a private corporation. That city had operated its municipal lighting plant for twenty-five years and found that it could not supply its citizens with electric energy as economically as it could secure it from a private corporation.

The city of Elbow Lake, Minnesota, has during the present year sold its municipal plant, as its experience for a period of over fourteen years has shown that the result of the operation had not been satisfactory and they could not supply the citizens with electric service as cheaply as it could be secured from a private corporation. These cities are small but it is in such cities that the voters can know what public operation costs—accounts cannot be juggled as they can in the large cities.

The city of Toronto, Canada, believing it desirable to own and operate its municipal electric plant entered upon that project, having been assured that it would cost but \$2,750,000. The total expenditure before the system when completed was \$7,500,000, and it was found that to protect itself against the interruptions inevitable to a high-tension line from a hydro-electric plant, a steam standby would have to be constructed at a cost of more than a million dollars.

The city of New York a few years ago, and I am sorry that I do not have the figures, being satisfied that it could operate the Staten Island ferry better than the private corporation, much more economically and much more efficiently, and turn a great sum of money into the coffers of the city and relieve the taxpayers, acquired and has since operated that ferry. The thousands the city has lost I will not pretend to say, but it is a matter of public record that the municipal ferry has been operated at a loss every year since the city took it over.

Many cities have been investigated by bureaus of public efficiency, and we do not find that in those matters which are properly within the province of municipal operation, there has been efficient and economical management.

Frederick A. Cleveland of the Bureau of Municipal Research, New York City, states in his book, published in 1909, as follows:

New York buys probably \$15,000,000 worth of supplies and materials per annum for current operation and maintenance. Yet it pays higher prices than are paid by persons who buy at retail for a small family. It buys in wholesale quantities and does not obtain wholesale rates. It pays cash but does not get cash discounts. It takes millions of goods into storehouses without holding anyone to account. It has little protection against deliveries short in weight and inferior in quality. It is safe to say that approximately five millions of every fifteen millions spent for supplies is worse than wasted.

The committee of city finance of the board of directors of the Cleveland Chamber of Commerce in its municipal accounting report, No. 3, dated April 8, 1913, states as follows (page 6):

There are no records showing the quantity of any article on hand in the various departments. This condition results in a duplication and unnecessary expenditures. In the Park Department it was found that in a number of instances oil and other material had been ordered in such quantities that they could not be consumed for years.

The Chicago board of public efficiency found practices of splitting into \$500 lots in order to avoid the necessity of open bidding. In one transaction alone this practice cost the city \$64,000.

The New York Bureau of Municipal Research in its investigation of certain departments in the city of Milwaukee in April, 1913, points out the absence of purchasing records, the lack of standards and specifications and the abuse of the purchase in open market in sums of less than \$200 to avoid the issuing of contracts as provided by the city charter.

A few years ago, a municipal survey was made of the operation of the departments in a large city in this country, and among other improvident purchases was that of a supply of pencils. The number purchased, I do not recall, but it was enough to last the city for a great many years. My impression is that the number purchased would have been sufficient to arm a large proportion of the Bulgarian army if those people could have been impressed with the belief that the pencil, like the pen, is mightier than the sword.

After Mr. Prendergast's election as comptroller of the city of New York, he was told that a certain bureau having twenty-three employees needed thirty more men to do the increased work assigned to it. Investigation was made and it was found that it was the duty of one man to post items from vouchers into a register or ledger. These entries were made during the months of November and

December at the rate of one for every eight minutes. Dividing the number of entries by the number of entries one man could easily make, it was found that fourteen men could do twice as much work as the twenty-three men had been doing.

The Chicago bureau of public efficiency in its pamphlet of July 9, 1914, pointed out that \$500,000 in interest was being lost annually to that city, and that there was no public record of the bank deposit's interest and earnings.

The Bureau of Municipal Research further found with respect to the police pension fund in New York, that it exists only as a legal fiction; that the deficiency in cash requirements to meet its obligations in 1912 amounted to \$1,135,188, or 54.1 per cent of the total amount needed for payment of the pensions during that year.

For years the city of New York has been financing asphalt pavements with fifty-year securities. It is obvious that this debt will remain in existence long after the property which it purchased has been worn out and replaced.

The Bureau of Municipal Research in the city of New York in its investigation conducted in the city of Pittsburgh found that \$240,000 of thirty-year bonds were issued for motor and fire department equipment. It is obvious that the life of motor and fire equipment is not thirty years. Long-time bonds for such purposes could be defended if the necessary replacement of the property purchased and worn out before the bonds became due was made a charge upon current expenses—but that is not done—new bonds are issued for the necessary replacements. This is more pernicious than trying to maintain rates so as to earn upon watered stock. Commissions can control the latter but not the former.

Rufus E. Miles, director of the Cincinnati bureau of efficiency, states that no attention was paid by city officials to efficiency, and points out one case where it was necessary to enjoin two contracts to save the city \$30,000. This will be found in *The Annals* of the American Academy of May, 1912.

The department of water supply, gas and electricity of the city of New York originally took (1913 report) 188 days to let a purchase contract. By careful planning this routine was reduced by 16 days, reducing the average time to 172 days.

The loss in dollars due to inefficiency in municipal governments may be approximately ascertained by reference to the Census Bulle-

tin of Financial Statistics of Cities with Populations of over 30,000. Those 199 cities paid out in 1913, \$984,000,000. Of this amount approximately \$564,000,000 were for ordinary operating expenses, \$110,000,000 interest on indebtedness and \$310,000,000 outlays for improvements. I believe that an examination of the per capita expenditures and the savings which have been reported as possible where investigations have been made, would show that in ordinary operating expenses these municipal governments are now wasting in excess of \$300,000 per day. This does not attempt to account for the losses in depreciation due to unwise expenditures and the losses in interest which could have been saved had there not been a rapid piling up of the city debt. The inclusion of these items might reasonably bring the losses sustained in excess of half a million dollars per day.

In connection with this estimate, it may be interesting to recall the statement made before the Interstate Commerce Commission by one of the gentlemen who appeared before this conference, Mr. Louis Brandeis, that the railroads in the United States could save a million dollars a day if they were scientifically managed. It was difficult to determine just how Mr. Brandeis reached this mouth-filling figure, but an examination of the book entitled *Efficiency* written by Mr. Harrington Emerson in 1909, may possibly throw some light upon his method. On page 16 of that book, Mr. Emerson stated:

"The total of the preventable material and labor waste and losses in American railroad operation and maintenance approximates \$300,000,000 per year."

Mr. Emerson's statement was really an estimate—he gave a few instances where economies could be practiced and then made the statement heretofore quoted.

As there are about 300 working days in a year a simple arithmetical calculation would enable us to reach Mr. Brandeis' figure of \$1,000,000, a day. By this method employed by Mr. Emerson and adopted, apparently, by Mr. Brandeis, the estimates I have given above would be very largely increased.

It is claimed that municipalities can raise moneys for public utilities at a less rate than can private corporations; that this cannot be done where the plant alone is pledged would seem clear. It can only be done, if at all, where the city has a wide margin between

its existing indebtedness and its bond limit, and it will guarantee the bonds so that it will be obliged to make up any deficit occasioned by losses in operation by resorting to taxation, or where the securities issued by the city are not subject to taxation.

The city of Toronto had an illuminating experience with respect to the ability of a municipality to dispose of its securities for the municipal electric plant. In the report of the commission in charge of its municipal plant for the year 1914, the following appears:

In the last annual report your commissioners expressed the opinion that with a continuation of satisfactory surpluses, a reduction of rates might possibly be effected during the year 1914. During the interval, however, three conditions have arisen not then contemplated which combine to defer for the time being any possible reduction of rates. In the first place, the interruptions of service on provincial hydro-electric lines which have since occurred, as already stated, established the necessity of providing a steam reserve plant, the heavy additional charges of which will constitute an additional burden on the system not then contemplated or allowed for. In the second place, it was not anticipated at that time that the enterprise would be loaded with the heavy additional burden since laid upon it by reason of the low prices at which the corporation of the city of Toronto found it necessary to sell the debentures authorized by the first two by-laws, the discounts and expenses of these two debentures amounting, as set forth in the second paragraph hereof, to the sum of \$893,100.56 or 18.4 of the face value of the issues, while the total flotation cost of the three issues amounts to \$951,756.56 or 16.85 per cent of the face value thereof; that is a little over 20 per cent of the net proceeds; that is to say that each \$100 of cash invested in the plant has cost, by reason of these heavy expenses, a little over \$120.

Commissioner Erickson of the Railroad Commission of Wisconsin in a paper recently read before the Michigan Electrical Association stated that when cities issued special improvement bonds which were secured only by the property affected or the income therefrom and were not made a charge against the city, that cities were required to pay fully as much in interest as was paid by public utilities.

It is also claimed that under municipal ownership the large salaries paid to corporate executive officers would be eliminated. This is probably true; but I do not think that there is anything in connection with the operation of any utility by a municipality which would attract a \$25,000 man so that he would accept a \$5,000 salary. In various countries, one of which I may cite is France, while salaries were reduced, the number of officers had been increased.

Sixteen officers were required to do the executive work in one branch of a state operated railroad which had formerly been done by three and their salaries aggregated more than had been paid the three. The financial advantage of employing sixteen men at lower salaries where the aggregate salaries were largely in excess of the amount of the three, does not readily appear to me.

It is further claimed that under private ownership the public is required to pay rates which will furnish an income upon watered stock. This is a favorite claim, but, with regulation, it amounts to nothing. It is of no consequence to the public in fixing the rates which the utility will be permitted to earn, whether it has stock outstanding aggregating \$1,000 or \$100,000,000. The rates are not fixed upon the amount of stock or bonds outstanding but are fixed solely that but a fair return will be realized upon the money actually used for the public service.

There is an apparent belief that the successful operation of a public utility does not depend upon a continuity of management. Just what that is based upon, I have never been able to learn. Under our government the tenure of official management is not secured for more than a brief period. A policy may be barely under way when it may be superseded by that advocated by a new management resulting from a new election.

Can any of you gentlemen hope to remain at the head of your municipality for more than two terms, and is it not probable, with our ever-shifting political views, that you may not even enjoy a second term? Does the public care how well or how ill you conduct your office? Of course if you conduct it ill you are furnishing ammunition for the "outs" and you will be all the more certain of retirement at the end of a single term. Must you not have the coöperation of your board of directors—the members of your council—in order to be able to carry out any policy? Can you be certain of having it?

What makes for efficiency in any service? Is it not a desire, with a reasonable hope of having that desire fulfilled, that one will secure advancement—a better position—will secure the job of the man higher up? What can you do to reward any man in the public service whose efforts are such that he is entitled to advancement; can you do anything for him? Does the general public know whether he does well or ill? He cannot be expected

to do his work with as much earnestness as he would under a private corporation where the success of his efforts could be rewarded, where he could be advanced by the executives of his company, and if they did not do so, where he would be in line for a better position with greater rewards with some other corporation. A man in the city's service is interested largely in retaining his connection with the political elements which got him the place so that he may retain it or possibly be advanced. He knows that his advancement cannot be as a reward of merit.

Would those of you who favor municipal ownership of public utilities invest, or direct the executors and trustees of your estate to invest, your savings in the securities of a municipally owned and operated utility when the payment of the interest and the return of the principal would depend solely upon the successful operation of the utility.

One of the speakers of last evening, the Honorable Mr. Maltbie, a member of the New York Public Utility Commission, said:

Gentlemen, is it possible that we cannot be permitted to spend our money as we see fit; is it possible that the members of any municipality will permit such a condition in which a public utility commission, or anybody else, should say to us how we shall spend our money?

I say no! Spend your money any way you want to, but don't operate a public utility and make up your deficit by taxation without saying so. Then we will have no quarrel with you, gentlemen, but don't say you operate your utilities at a great profit and at lower rates than the public utilities privately managed in that or similar cities can or will do, unless you put in all the items. Don't make up the deficit from taxation or from some other fund.

Before I forget it, I wish to refer to a statement which was made by one of the speakers this morning concerning the wonderful result of municipal operation of street railroads in Glasgow and other foreign cities. He said you do not find any over-crowding. Why? Because they will not allow the people to get on the cars when there are no seats. Will you stand it in your city? Will you help the railways to prevent over-crowding beyond comfort? You have probably heard that we have had a complaint of over-crowding on the street cars in the city of Milwaukee. We have it in every city. One of the railroad commissioners of the state of Wisconsin, told me he stood on the corner of one of the busy intersecting streets to observe

conditions for himself, so that he would not have to rely upon the reports of the company's inspectors or would not have to rely upon the reports of his own inspectors, and there were two cars, within ten feet of each other, destined for the same place, the first one crowded, the second one with room in it. A man brushed by him to get on the crowded car and the commissioner said, "Wait, take that other car; it is going to the same place," and the man said to him, "Get out of the way; I want this car." That is what the American man wants; he wants "this car" and he is going to have it.

Do you know why we have congestion in these American cities? It is due to the fact of the mistaken policy, I honestly believe, of the construction of high office buildings. Can you have, in any city, office buildings within an area of less than a mile which contain 5,000, 6,000, 7,000 or 10,000 people, and have all of them present themselves for transportation within a short space of time without over-crowding the cars, and can your municipally operated railroads provide cars enough for them to take care of them without crowding? You cannot put cars enough upon the rails. If you put them as close together as beads on a string and run them around in a circle, you cannot prevent over-crowding.

Mayor Mitchel (of New York City) spoke last night of the trouble they have with the traffic situation in the city of New York. Any system of transportation which is devised in New York City, or in any other city similarly situated, is inadequate before it is completed, due to the fact that the population increases and the congestion increases more rapidly than the transportation facilities can be provided. Look at the subway. They were going to take care of 400,000 people per day. That was going to solve their transportation problem. It seemed to be the millenium, as to transportation, but the subway was not completed before it was inadequate. They had to lengthen the platforms and lengthen the trains. They spent hundreds of thousands of dollars in order to take care of the people who presented themselves. That is the reason for over-crowding, and will always be so, whether municipally operated or privately operated.

Now, gentlemen, I do not think any of you will claim that the public utilities, privately owned, inspired the report of Mr. Mahone, recently published, he being the known representative of the labor unions, among the street railway employees. He has recently re-

turned from Europe, and I will read a portion of his report. It may be familiar to you, but perhaps if I read it, you may remember a little of it, and it refers to the operation of the street railway in Glasgow, which the gentleman referred to this morning:

Glasgow and suburbs have more than a million population, with 194 miles of street car tracks. Cities with one-fourth the population in this country have much more trackage. The fares on the Glasgow system vary from one cent to fourteen cents, according to distance. The average ride for one cent is 1.15 miles, and so on up to the fourteen-cent fare, when the average ride is 14.48 miles. Fares are collected on the zone system. When a passenger rides from one zone into another he pays an additional fare. Of a total of 336,654,624 cash fares realized by the Glasgow Corporation last year, 211,462,484, or 62.81 per cent, represented one-cent fares. (Mahone Report.)

Does that make for distribution? Does that make for healthful, happy, moral living? It makes for congestion, gentlemen. The working man must live near his business if the fare which he must pay in order to ride from his home to his place of work is fixed as in Glasgow.

This is claimed to be proof that the public is enjoying cheap fares. This is not correct, for the Glasgow system, like all other European cities, in which the systems are municipal and private, does not issue transfers, and a passenger may ride on several lines to reach his destination and have to pay an additional fare on each. On every line he is a cash passenger, and helps to swell the total class of fare he happens to pay, so that the so-called cheap fare of Glasgow, as of Europe generally, is not so cheap when the small distance it covers is considered, and certainly not cheap when compared with the buying power of the workers as reflected in the impossible wage they receive. (Mahone Report.)

If the members of this conference really desire to save the public money, I think their attention should first be directed toward securing an efficient and economical management of the affairs which properly belong to the municipality. There is plenty of opportunity in that field, and when it can be shown that those affairs are efficiently and economically conducted it will be time enough to consider taking on the burden of operating public utilities.

Everything which is claimed by the most earnest advocate of municipal ownership can be gained by private ownership under regulation. The government's duty is to govern and control and

not to serve. Nothing should be undertaken by the government which can properly be done by private persons. To do so puts the government in a position which it should not occupy, and removes from public endeavor some of the proper opportunities for gain and advancement.

It is said that regulation is not efficient and that public utility owners advocate regulation because they fear municipal ownership. Those who say that regulation is unsatisfactory base it entirely, I believe, upon the fact that it is their view that regulation means a reduction in rates in every instance, and the placing of as many burdens upon the utilities as mortal man can conceive. And when an application for reduction in rates or an increase in service is made, and the imposition of any additional burden is refused by a commission—then it is claimed that the commission's control is a failure.

As to the other claim that public utilities welcome regulation only because they fear municipal ownership, I have to say that my acquaintance with the managers of public utilities leads me to believe that their willingness to submit any differences they may have with the public to a commission for decision is not due to the existence of a fear of municipal ownership, but that it is due to the fact that they are willing to have their differences decided by any impartial body removed from local influence.

Some gentlemen, among whom I may mention Mr. J. Alden Smith, Dean of the Graduate School of the University of Wisconsin, Mr. Delos F. Wilcox of New York and Professor Pond in *A Treatise on the Law of Public Utilities* state that regulation is a failure and advocate municipal ownership. A reading of their articles shows that their belief that regulation is a failure is due to the fact that municipalities do not secure all that they demand, and one of them advocates that regulation should be by the municipality. Those of us who have had experience with regulation by municipality know what that means. It means that every common council will, if it is within its power so to do, reduce rates charged by every utility within the corporate limits, and without any proper investigation being made. Ordinances increasing the service on any and all street railway lines in the city will be passed in the shortest space of time. Ordinances reducing telephone, electric and gas rates would be passed with the same facility and speed. Legislatures are prone

to that very practice. You are all familiar with the fact that notwithstanding that New York had a commission which had charge of railroad rates, the legislature passed an act reducing the passenger rates. This was so manifestly unfair that Governor Hughes vetoed the measure; but, unfortunately, we cannot always have a governor or other chief executive with that courage.

In the state of Wisconsin, the railroad commission in response to a petition, investigated the question of the steam railroad passenger rates, and after careful investigation decided that two and one-half cents per mile was as low as they could be reasonably reduced; but the legislature, without making the slightest investigation and at the instance of a man who desired to make political capital for himself and his party, introduced a bill and passed it in record-breaking time, reducing the passenger rate to two cents. The people had the rate but the companies could not afford the service that had theretofore been given by them, and the public have been obliged to put up with less frequent service.

Among the reasons against municipal ownership may be stated the following:

1. Public officials in charge will not have had the necessary experience and training.
2. Extensions of service will be made for political reasons, often into territory where the business would not afford a return upon even a fair proportion of the cost of the extension.
3. Corruption will not be decreased but will be increased.
4. Employees will not hold their places on merit but by favor and will have no incentive to improve.
5. Public service will be less even. The policy and plan of operation and extension of the utility will be changed with change of administration.
6. Politics will enter into every branch of the service to the detriment of the service.
7. Taxes will have to be increased to make up the deficit caused by operation and to pay for costly mistakes.
8. The individual employee will not have a reason for giving the best there is in him. He can gain nothing by increased effort or showing ingenuity.
9. The public will gain nothing in service or rates and will lose as to both.

10. If a municipality once assumes such an undertaking it must assume others. The history of other countries shows that it cannot stop.

To have public utilities operated by municipalities is to destroy one of the greatest incentives which moves men to their highest endeavors and is the true source of all progress. Having undertaken the operation of public utilities experience of other countries shows that they cannot stop; that they must engage in other lines of endeavor. The government should confine itself to its true purposes, namely to control and regulate. It should not serve. The hope and desire for gain—for material advantage—is what makes for all material progress; but for it we would still be ploughing with the stick, tracing our history upon a fragment of stone with the strong bone of some animal we had slain. America would not have been discovered and the people of the earth would be still stumbling along in the darkness of profound ignorance with no pride in the past and no hope for the future.

OPEN DISCUSSION

HON. JAMES M. CURLEY, Mayor of Boston:

I want to say that I do not subscribe to the proposition that it is an impossibility to secure the assistance of the substantial, hard-headed business men of any community in the matter of assisting in the proper, and honest, and economic administration of public affairs.

I will admit, it is an almost impossible task to induce them to become candidates for office in our city government, but it has been possible for us in Boston to avail ourselves of their services in an advisory and supervisory capacity through the creation of an Industrial Bureau, whose existence is made possible by the private subscriptions of more than 300 of our leading successful business men. Those men have raised a fund of \$70,000. They are financially, and they are personally, interested in an honest administration of public affairs, and through their instrumentality it has been possible in Boston for this year to secure the adoption of a gas street lighting contract on a ten-year basis at a saving of \$36,000 per annum to the city, and within the next thirty days an electric lighting contract will be signed which will mean a saving of \$82,000 per annum, or a total of more than \$1,180,000 on a ten-year street lighting contract.

The real weakness of all municipal administration is the fact that there is no standard system to follow, and the establishment of municipal standards that may serve as a guide for proper municipal administration are just as necessary to publicly owned utilities as they are to the privately administered public service corporations

HON. OLIVER P. NEWMANN, President Board of Commissioners,
District of Columbia:

Mr. Chairman, Ladies and Gentlemen: I want to put the city of Washington, the capital of the United States, in the federal District of Columbia, squarely, positively and affirmatively in line for public ownership of municipal utilities.

The government of the District of Columbia consists of three commissioners. For thirty-five years, until a little more than a year ago, I think those commissioners uniformly opposed any suggestions

looking toward public ownership of local utilities. A great many of them, for a considerable part of that period, would not have broken their necks to have obtained effective regulation of local utilities. But a little over a year ago three commissioners of the District of Columbia were appointed, each one of whom believed positively in public ownership of municipal utilities, and each one of whom believed in the regulation of public utilities as a sort of necessary evil, which would lead to the ultimate proper solution of the question—public ownership.

These commissioners are appointed by the President of the United States. I do not wish to commit the President of the United States to public ownership of local utilities, and I cannot do so; I have no authority to do so. But I wish to leave with you the thought that the three gentlemen whom he selected for commissioners of the District of Columbia, for the work of conducting the government of the national capital, were municipal ownership men, and that did not deter him from appointing them.

A great many people imagine that the District of Columbia, or the city of Washington, is a sort of a beautiful shell in which there are a number of amiable and lesiurely gentlemen who conduct the affairs of the national government, in a more or less leisurely and pleasant way. But what they do not realize is that the city of Washington is more than that. It is a community of 350,000 people, with all the social and economic problems and difficulties, with the inspirations and hopes of any other community of 350,000 people.

We have not self-government there in the District of Columbia as you have, so I cannot positively say that the people of the District believe in public ownership as the commissioners do, but I do go so far as to say that I believe a great majority of them believe in public ownership of local utilities, and that they desire the utilities of the District of Columbia to be municipalized.

So much for the fact that the District government believes in the economic principle of public ownership. The situation, however, is much better than that. We are going to get it in Washington. Sitting behind me on this platform is a gentleman who is a member of the House of Representatives, representing the state of Ohio, a member of the committee on the District of Columbia of the House of Representatives, the Hon. Robert Crosser, and a

bill bearing his name and directing the commissioners of the District of Columbia to condemn and acquire the street railways of the District of Columbia, has been introduced by Mr. Crosser.

Of course, anybody can introduce a bill, but this bill has been reported to the House of Representatives by the District Committee of the House of Representatives, with a strong report from that committee, advocating its passage, and is now upon the calendar of the House of Representatives, where it will be taken up this winter, and where Mr. Crosser believes it will receive favorable action. In other words, he believes and I believe that the House of Representatives is going to pass a bill this winter for the municipalization of the street railways of the national capital.

REMARKS OF HON. RUDOLPH BLANKENBURG

Let me extend to you, who have come from a distance, on behalf of the city of Philadelphia, our appreciation and sincere thanks for your presence at this important conference. We feel that the conference has been a great success and will lead to gratifying results not only in bringing about a better understanding between municipalities and public service corporations, but also because we, individually, have been brought into closer touch with one another.

I now take great pleasure in introducing to you the presiding officer of this meeting, who for seventeen years was a member of the Interstate Commerce Commission, and is now the director of valuation of that commission—Judge Prouty of Washington.

HON. CHARLES A. PROUTY, Director of Bureau of Valuations, Interstate Commerce Commission, Washington, D. C.:

You gentlemen represent the dwellers in cities, but you have called to preside over your deliberations for this hour a country man. Not only are my inclinations toward the fields but I am a practical tiller of the soil. A hoe handle is dearer to me than a golf stick, and no perfume is so sweet as that of the growing grass and the fresh-turned earth of springtime.

Nevertheless, I must admit that the activities of today are largely confined to the town. Our cities are the suns of the intellectual, the commercial, of even the moral sphere whose rays penetrate and enliven the country. We have our problems in the country, one of which is to feed you gentlemen of the cities, to do which, according to my mathematics, we must double the yield per acre of our farms in the next half century. We have other problems of importance, but I must still admit that it is in the city where the evils congregate, where poverty is the most biting, where competition of all kinds is the fiercest, where land and everything which goes with it, sunshine and pure air and a comfortable dwelling place, are forced to extravagant prices by the congestion of population, that the problems are the most difficult and the most pressing.

One of the gravest of these problems is that presented by the public utility. It has come to be admitted, although not until after much experimentation and much discussion, that certain things—water, gas, electricity, transportation from point to point within the municipality—are of such controlling importance that it is the duty of a municipality to see to it that they are furnished in a proper way, of a proper kind, and for a proper price. That is the utility problem.

Nothing has contributed so much in the past to the difficulty of a proper solution of that problem as the want of some consistent and comprehensive plan. If you will look over the history of any city in the United States of considerable size and trace the record of its utility efforts, you will find that large sums of money have been squandered because there was no comprehensive idea of what should be done or how it could best be done in that direction.

It is not my duty to participate in the discussion; I am here simply to preside; so to speak, to direct.

Before we enter upon that subject, however, we are to hear from two gentlemen who should have spoken this forenoon but who are of the left-over class. The first of these is Mr. M. N. Baker, editor of the *Engineering News*, of New York City, and the second is Hon. Robert Crosser, United States Congressman from Ohio.

MUNICIPAL OWNERSHIP AND OPERATION OF WATER WORKS

By M. N. BAKER,

Editor of *Engineering News*, New York City.

The rapid growth both in the number of water-works and in the percentage of those works under municipal ownership was one of the marvels of the nineteenth century. The century opened with sixteen works in the United States, only one of which was municipally owned. It closed with perhaps 3,500 works, more than half of which were under public ownership and 200 of which had changed from private to municipal ownership. No statistics of ownership for the whole United States have appeared since *The Manual of American Water Works* for 1897, but it is known that changes from private to public ownership have gone on at a rapid pace in the last seventeen years and it is believed that of the hundreds of new works built in that period the greater part are now owned by the city which they supply.

All of the major cities of the United States own their water-works until San Francisco is reached. Going over the whole list of cities which the census bureau estimates as having a population of 30,000 and upwards it appears that in round numbers there are 150 municipal to 50 private plants, or 3 public to 1 private. If total populations supplied were considered, the preponderance of municipal ownership would be still greater.

Competing water companies have been few. Competing municipal and private works have been fewer still and such competition ends, sooner or later, with the city in full possession of the field. The reason for this lack of competition is that the water-supply service is one of the most complete natural monopolies in existence.

This natural monopoly feature and the close and vital relationship of public water-supplies to the health of water consumers and to the safety of both life and property from fire, go far toward explaining the rapid growth of municipal ownership of water-works and the persistent demand for a change from private to public ownership where the former prevails. It does not follow, however,

that every city still under private ownership is in duty bound to acquire works of its own without delay. A variety of local conditions may determine the wisdom of continued private ownership for a few or even for many years. Good service under private ownership is increasingly possible each year, because the newer water-works franchises and contracts are more definite and fairer to each side than the older ones and because of the growing prevalence of state utility regulation. Nevertheless, no matter how far in the future matters of local expediency may throw municipal ownership it may well be the ultimate goal of every city, town and village that has not yet attained it.

Notwithstanding all that has been said and so well said in favor of home rule I still believe, as I have long believed, that municipal as well as private water-works should be subject to state regulation. Even if in no other respect there must be state regulation of the purity of the supply. This principle was recognized and put into effect in a number of states before state regulation of utility rates was thought of. Until recently state regulation of the sanitary quality of water-supplies was always vested in state boards of health and with one or two partial exceptions this is still true.

The case for state control of the purity of water-supplies rests upon the fact that public health is a matter of state and national concern and cannot safely be left to local control. A city with a polluted water-supply does not stop with causing a high local typhoid rate—though this, in itself, is a proper matter for state interference. Such a city contributes in numberless ways to the spread of typhoid throughout the whole state and over the whole country.

Besides the question of purity, state control of water-supplies, regardless of ownership, is demanded to settle rival claims for sources of supply which two or a half dozen cities may wish to draw upon. This matter is now being controlled by state boards of health in some states and by state water or state conservation commissions in others, but not often, if at all, by state utility commissions.

If time permitted I should like to present in detail the argument for state control of water-works accounts and reports of physical data. Where such control is now exercised it is vested sometimes in a state board or commissioner or auditor of municipal accounts and sometimes in a state utility commission.

Coming to another phase of the subject, I believe that it would

be salutary if there were some measure of state control over the way in which a city raises its money to defray the cost of its utility service. In the case of water-works, in particular, rank injustice now prevails in the distribution of the cost of the service between the private consumer and the city at large. I believe the Wisconsin commission has taken a long step in the right direction in compelling some cities to raise by taxation an adequate sum to pay for fire protection and other public services instead of saddling this charge upon the private consumer. The whole water-works fraternity of the country has for years urged that the taxpayer and not the private water consumer should meet the cost of fire protection, street watering, sewer flushing and the water-supply to public buildings.

Possibly some of you may have observed that such instances of state regulation of water-works as I have specified are vested in four independent commissions: (1) health; (2) water-supply or conservation; (3) utility; (4) accounting or auditing—and there may be still others. Some of these commissions have overlapping jurisdictions. Strongly as I believe in state administrative control of municipal affairs I do not wonder that there are complaints of over-regulation when there are so many municipal masters—although even a multiplicity of state administrative boards is infinitely better than the old-time state legislative interference which these boards are lessening.

Distasteful as any sort of state control may seem to some, cannot we all agree upon the desirability of placing all such control as may from time to time exist under one instead of many commissions—a single state board of municipal control, under which there would be a bureau for each branch of the municipal service subject to state supervision, the whole working in harmony and so centralized in administration as to give one instead of many municipal masters?

WHY I BELIEVE IN MUNICIPAL OWNERSHIP

BY ROBERT CROSSER,

United States Congressman from Ohio, Member of Committee on the District of Columbia.

Mr. Chairman, Ladies and Gentlemen: Perhaps I would have hesitated about speaking had not Mayor Blankenburg made my task somewhat easy by requesting me to make an address upon the subject "Why I Believe in Municipal Ownership." Certainly anyone should be able to give the reasons why he believes in a proposition himself, whether or not the reasons may seem sufficient to others.

People engage in business for the purpose of satisfying their desires, and the natural law which prompts one to serve his own interests primarily, invariably is operative in the conduct of any business. This human tendency, if unrestrained, would cause those engaged in vending any sort of merchandise or service, to demand all that the person desiring the merchandise or service would be willing or able to give for it. It so happens, however, that in all ordinary lines of business, we have a great many persons who are able to supply the same kind of merchandise or render the same service, and as each is anxious to do the business, that is, make the sale or render the service for profit, this rivalry or competition reduces the price of the merchandise or service in question as far as possible and still yields a reasonable profit. Where, however, any service must necessarily and properly be performed by an agency enjoying the sole right to serve the public generally, the natural law involved in competition can, of course, play no part. Public utility service, so-called, should be rendered by an agency enjoying a monopoly of the right to render such service, and this is generally the case. The question then arises, whether this monopoly right should be exercised by private individuals or institutions, or by public agencies.

Now it is conceded that the prime, and really the only motive in private enterprise, is profit. The greater the profit the more successful is the business from the standpoint of the person or persons who own the business. The greatest profit is derived by exacting

the highest price which the person desiring service or merchandise is willing to pay in order to get it, or by giving as little service or goods as possible for what the buyer can pay, which amounts to the same thing. That is the natural tendency of the private individual or individuals enjoying the sole right to supply any public service, unless there is some check.

Of course, from the very beginning the private owners of public utilities have been subjected to certain restrictions as to the price to be charged the consumer, the manner in which the service should be extended, etc. It was self-evident that some such conditions should be imposed upon the private owners, since otherwise, as I have already stated, they would practice extortion, render inferior and inadequate service, etc. The natural desire to serve their own interests, however, by procuring the greatest profit possible, in the very beginning caused, and still causes, those desiring the exclusive privilege of operating a public utility, to employ every means for the purpose of inducing the municipal authorities to grant the privilege in question upon terms as favorable as possible to parties desiring the right to operate the public utility. The municipal authorities, however, unless subjected to some particular influence which would induce them to do otherwise, naturally would be disposed to see that the public were fully protected. The persons desiring the particular privilege in question, therefore, begin to devise ways and means of influencing the municipal authorities to grant the privilege of supplying the service upon terms satisfactory to the persons seeking the exclusive privilege in question.

The most obvious method, and the one generally employed in the early history of the public utility, is to offer some sort of a reward to the officials having authority to grant the private person or company the privilege desired by them. Almost every important city in the United States has had its experience with this sort of corruption of its public officials.

In his book entitled *Facts and Opinions*, ex-Mayor Hazen S. Pingree, of Detroit, says that the Citizens Railway Company of that city "literally owns the council, body and soul." He states that it would pay \$3,000 for a member of the city council and actually offered to buy the mayor of the city for \$75,000.

In New York City the Broadway Surface franchise was secured by influencing the councilmen in the manner referred to, and those

councilmen rejected the offer of the Cable Railway Company to pay the city of New York a bonus of \$1,000,000, but the aldermen, in order to enrich themselves, refused to grant the franchise to the Cable Company, although it would have meant a million dollars to the taxpayers of New York City. Upon investigation it was shown that the aldermen were given \$20,000 apiece, and that the total expense of this nature to the Railway Company was \$500,000. These we find to be the facts in the report of commissioners of railroads relative to the Broadway Surface Railroad Company, as set forth in New York senate document No. 79, in the year 1888.

We all remember the San Francisco scandal, which resulted in a number of prominent men being indicted and some convicted.

Sometimes, however, public officials are found who cannot be tempted by the offer of any reward, and in such cases it is frequently found that the persons striving to procure the so-called franchise or similar privilege, undertake the intimidation of the official or officials who have manfully refused their bribes.

But it is unnecessary, in the short time at my disposal, to discuss all of the different methods employed to accomplish the one purpose, *viz.*, the procuring of the monopoly privilege on terms which are satisfactory to those seeking such privilege. Even after they have procured the right in question, the tendency is to operate their plant in such a manner as proves unsatisfactory to the public generally. In order to increase their profits, they naturally try to minimize the expense of operation as much as possible, and this means deterioration in service.

It is a common saying among street railway managers, for example, that "strap-hangers make dividends." Schedules are reduced in order to reduce the expense. The wages of employees are kept down as much as possible so as to leave as great a profit in the hands of the company as possible. These are a few of the evils resulting from private ownership and operation of public utilities. There is, however, one other objection which I have not mentioned, but which seems to me to be one of the most serious of all.

It will be conceded by all that most persons want men in public office who hold views similar to their own, and who will conduct themselves in their official capacity in such a manner as will promote their interests. This fact causes men who must procure special

privileges in order to conduct their business, as is the case with every public utility, to exercise their influence and exert themselves toward the election or appointment to public office of men who will be favorably disposed to the interests of those who must have special privileges. Men of this type, elected or appointed to public office, will, of course, feel inclined to pay the obligation which they feel they owe to those who interested themselves in their election or appointment. Now, men who can be relied upon to do the bidding of any special interest, either because they owe their election or appointment to the influence of that interest, or because of some reward offered for compliance with the request of such interests, are certainly not men of strong moral fibre, but, on the contrary, are generally weak and inefficient. As a result we have not only maladministration by such officers as to the public utilities, the owners of which have befriended them, but also an inefficient administration in regard to all other matters, for men who are weak enough to be controlled by such special interests, have not the force and sense of justice which would qualify them to administer the ordinary affairs of government impartially and efficiently. Men who are weak enough to bargain away the people's rights for political support received before election, or for material reward offered after election or appointment, are not the kind of men who have the clear vision and the high ideals necessary to enable them to perform the duties of public office in the proper manner.

While those persons having an interest in privately owned public utilities have no desire to have a bad police system, or inefficient school system, or a bad administration in any of the ordinary lines of municipal activities, and may, in fact, be trying hard to "clean up the city government," as they call it, in these respects, and to give us what they delight to call a "business administration," nevertheless, insofar as they may find it necessary for their own interests, to put weak and pliable men into public office, just so far have they been the cause of the inefficient government in all of the other respects mentioned.

But the evils of private ownership have, for several years now, been generally acknowledged, even by the more intelligent men directly interested in privately owned public utilities. They realize the force of the objections and the arguments made against the institutions with which they are identified, and, in order to postpone

the day of reckoning as far as possible, they are now constantly urging regulation as the proper remedy for the evils which invariably accompany private ownership. It is somewhat amusing to note how eager and vociferous are the demands of those private owners for regulation. It seems to be assumed by them that regulation was never attempted by public authority during the early history of public utilities, whereas, the fact is that from the very beginning they have been subject to certain legal restrictions. The terms of the franchise, the traffic regulations, etc., were all efforts at regulation. What is really desired and proposed by these private concerns, is simply a little different form of regulation. They would have the regulating authority transferred from the city council, or similar authority, to some state board. In fact, Mr. Rosecrantz, general counsel for the public utilities companies of Milwaukee, frankly says that he objects to regulation by local authority.

We all know that city councils have now become much more sensitive to the people's will, and that the people of the cities are beginning to understand very thoroughly their rights in regard to public utilities. It is, therefore, natural that those who are so loudly clamoring to be regulated, want the regulating authority as far away from the seat of war as possible, and desire a board whose authority is not derived from the people who must deal with the privately owned utility.

Practically every objection which has been shown to apply to private ownership and operation of street railways under the franchise plan of controlling the privately owned utility, applies to the later method of regulation. It is just as natural for those who must use the public property to conduct their business, to make every effort possible to prevent the new kind of regulation from diminishing their profits as it was under the old system of regulation. They are just as anxious to have members of public utility commissions appointed or elected who are satisfactory to them and to their interests as they were in the old days to have councilmen or aldermen who were satisfactory to them. They want men who can be relied upon to regulate them in the way they want to be regulated. In short, we cannot change human nature by changing the name of the regulating authority.

This is not all theory either. The history of regulation has been marked by constant resistance against every important order

or measure made for the purpose of accomplishing anything substantial in the way of control. The Cullom Act, which was enacted in 1887 for the purpose of regulating interstate commerce, was followed by the Spokane case, which was decided by the Interstate Commerce Commission in favor of the city of Spokane. Immediately the case was taken into the courts, where it remained for a long time, the fourth section of the law being finally declared unconstitutional. The Dolliver-Hepburn Act was then passed in 1906, to meet the objection which the court found in the Cullom Act. The city of Spokane filed another case similar to the one first mentioned, but the main question was not finally decided until after the lapse of seven or eight years.

It is claimed by the defenders of private ownership of public utilities, that while the private companies have sinned in the past, and have been guilty of the wrongs to which I have already referred, they now have reformed and are conducting themselves as good people should do; in short, that they have practically forgotten self interest and are simply interesting themselves in the public weal. It is not necessary to look very far for glaring proof to the contrary. A little over a year ago the railroad commission of San Francisco in passing upon the application of the United Railroads of San Francisco for permission to issue \$2,350,000 five-year notes for the purpose of paying off certain of its bonds, found that the United Railroads had exchanged with its owners its own promises to pay and set them up as investments. Such conduct is the natural result which we might expect when the chief motive which actuates the sole agency supplying any public service, is profit. Regulation may, and no doubt does, prevent the evils to which we have referred from going to the extremes that otherwise would be the case, but the theory of regulation is not sound. It is never a really effective method of procuring the desired results, and is not at all permanent. It is an unsound philosophy, which insists upon the maintaining of conditions which naturally induce human nature to go wrong when it comes in contact with them. If we make it to the material advantage of men to veer from the path of justice, the likelihood is that they will commit injustices. A man may be willing to sit up all night for two or three nights to guard his home against a burglar whom he knows to be at large in the community, but after awhile he will get tired of doing this and will endeavor to have the burglar

locked up instead, so that he can go to bed and have a good night's sleep. So it is with the public in regard to private individuals who are seeking a monopoly of the right to provide a certain public service. The public may, through utilities commissions, etc., watch them and regulate them for awhile, but ultimately it will be found a much better way to quit the task of watching lest some private individual should rob the community of its property, and, instead, arrange to serve itself and shut the door against those who may be tempted to secure unfair advantage over the public.

Even assuming that regulation should succeed pretty well in the beginning, because of an aroused public interest, the tendency would be to lapse into the old habits. The tendency is for the mind to tire of constant watching and relax its vigilance, and so it is with the composite mind of the public. It becomes weary of the task at times, and relaxes its attention, but the persons who are either seeking the private ownership of new public utilities, or more favorable conditions in regard to those already established, have a strong motive for urging their demands, and then conditions are established from which it may be impossible for the public to be freed for a long period of time.

I believe that municipal ownership and operation of public utilities is the real solution to the problem. Under this plan profit is not the prime incentive, as in the case of private ownership. The object of a municipality is to render the best possible service at the lowest price which will enable it to pay expenses. There are no privileges to be sought by a municipality, and hence no temptation to bribe or pay anyone for privileges. The public officials charged with the duty of operating any utility, as they reduce the cost and increase the quality of the service, will accordingly please their employer, namely, the people.

The motive of such official is to procure the approbation of the general public, and this is possible only by serving the best interests of the public. According to his success will be his reputation, the certainty of employment, and the increase of his compensation toward the maximum for the kind of employment in which he is engaged.

There is really but one argument of any consequence ever made against municipal ownership, and that is the fact that the persons employed to operate the utility would be selected with the object

of building a political machine. It is true, of course, that under any popular government, the public servant, as well as the private citizen, can exercise his influence to make the government reflect his will as much as possible. The only question, therefore, is whether the system of private ownership or public ownership gives the public utility employee the greater advantage over the ordinary citizen. Certainly under the system of private ownership, the employee of the public utility exerts his influence in favor of his employer in any dispute which it may have with the public. Of course, where the dispute concerns the terms of employment of the employee, he naturally opposes the company. This was the experience in the city of Cleveland during the street railway controversy between 1901 and 1908. Employees of the old street railway almost unanimously supported the contentions of the company at every election and opposed Mayor Johnson. But, in addition to this fact, we must remember that there were at least as many stockholders as employees, who were also straining every nerve to procure that for which the company was fighting. Now, under municipal ownership, we would have about the same number of employees, and we may assume that they would also be politically active in behalf of those who had employed them, but we do not have the large number of stockholders working in conjunction with the employees. Every citizen is a stockholder in the municipally owned utility, and his interests are in common with every other citizen, so that the public advantage is his advantage. It is claimed, however, that because of the desire to build a machine and perpetuate themselves in office, those having the authority to employ the operatives of public utilities would select men who are not qualified to perform the duties incident to the position given them, but rather would employ men because of their superior political influence and their ability to control this ward or that precinct. This argument ignores entirely the element of public sentiment. Since we have popular government, those entrusted with the management of publicly owned utilities would be under the necessity of pleasing their employer, the public, if they desired the success which most public officials do desire, *viz.*, the satisfying of the public demand. If such public officials should appoint a lot of incompetents to operate the utility, the service would necessarily be very unsatisfactory and would meet with severe condemnation from the public. This would certainly

be injurious to the official entrusted with the management of the utility, and probably would mean his removal from office. It would seem, therefore, that intelligent selfishness would cause him to select the best men obtainable to operate the utility, for the success of which he would be responsible.

But, as a matter of fact, have we heard of anyone making a political machine of the police force, or the fire department?

One fact has been entirely overlooked by those who are so much concerned about the political machine which would be formed from the utility employes, and that is that we would then have abolished the privilege-seeking horde. We would no longer have to sit up nights watching lest they might swindle the public out of its rights, and, consequently, the people, having rid themselves of that task, would be free to watch more closely the conduct of its public officials, and see that they discharged their duties in an efficient manner. There being then no franchise scandals possible, the newspapers would devote themselves to criticism of public officials as to the discharge of their duties as managers of the publicly owned utility, as well as in other official capacities, all of which would make it very difficult, if not disastrous, for the managers of publicly owned utilities, to employ men regardless of their ability and training.

I believe therefore, that, upon principle, municipal ownership of public utilities is absolutely sound.

Many who agree with us, however, in our reasoning as applied to a particular public utility find considerable difficulty in making a general application of the principle of municipal ownership of public utilities. The opposition insists that the logical conclusion of our argument is that we must have municipal ownership of bakeries, grocery stores, etc. That, of course, does not follow. The true test is this: if it is necessary that the agency rendering any service to the public must have a monopoly of the right to render such service and the streets or other public property must be used in doing so, then that agency should be the governmental authority itself.

Before closing, I wish to call attention to the fact that the experience in Great Britain substantiates the claims which I have made. In 1906 the National Civic Federation created a committee for the investigation of municipal ownership of public utilities. This committee selected five cities, consisting of Glasgow, Leeds, Liver-

pool, Sheffield and Manchester, which originally had privately owned street railways, but which later municipalized the street railway systems. The committee determined the percentage of increase of extensions of the railway systems during the entire period of private ownership, and also the percentage of increase for a like number of years after the date of municipalization, and it was found that the annual average increase during the period of company operation was 1.2 per cent, while the average annual increase during the period of city operation was 15.8 per cent. The committee also calculated the percentage of increase of extensions of street railways in five cities where private ownership had continued to the date of collecting the data, using the dates of municipalization of the first five cities as a dividing date for the five cities where private ownership continued to the date of collecting the data. It was found that the average annual increase of extensions before the dividing date was 4 per cent, and that the average annual increase after the dividing date was 5.5 per cent, a difference of only 1.5 per cent. Compare this with the first five cities referred to, which showed an annual average increase of 15.8 per cent under municipal operation as against 1.2 per cent under private operation.

Data were collected in regard to the reduction of fares in both of these groups of cities for the same periods. During the private ownership and operation of the street railways in the first group, consisting of Glasgow, Leeds, Liverpool, Sheffield and Manchester, the average annual reduction was 0.5 per cent, while during the period of municipal ownership and operation in the same five cities, the annual reduction was 3.21 per cent, or more than six times the reduction made during private operation. In the group of six cities consisting of Dublin, Edinburgh, Bristol, Belfast, London and Norwich, which had private ownership until the date of procuring the data, we find very different results. The committee divided the period of private operation into two parts, using the dates of municipalization of the first five as the dates for division of the companies' experience in the latter six cities. During the first period, the average annual reduction was 2.46 per cent, while during the second period, the average annual reduction was only 0.61 per cent. It will thus be seen that the per cent of reduction decreased during the latter part of the company operation, whereas, in the

first five cities mentioned, in the period of municipalization it increased more than six times.

The evidence produced before the committee also indicated that the condition of labor had very much improved during the period of municipal ownership and operation, and this is but natural. Since the public generally consists of persons who must earn their living, they are disposed to be fair with those employed by the city. During the period of rapid municipalization in Great Britain, the reduction in the hours of street railway employees amounted to about 48 per cent, while the increase in wages at the same time amounted to about 42 per cent. Mr. W. L. Magdon, manager of the Brush Electrical Engineering Company, of Great Britain, who appeared before the National Civic Federation Committee in opposition to municipal ownership, said:

It is beginning to be felt by those engaged in private enterprises that any industry in which the municipalities become established, is a very good one for the private trader to be out of. It is a rather serious but sincere statement. We find in tramway work, they establish labor conditions which sooner or later become imposed by pressure on private undertakings, and these are so onerous as to seriously handicap the private enterprise.

In testifying before the Civic Federation Committee, Mr. T. M. Wood, of the London County Council, concluded by saying: "We regard it as a great advantage to work the men humanely—quite as great an advantage as 1 per cent more profit."

In conclusion I wish to re-state briefly, the advantages which I think will result from municipal ownership and operation of public utilities. First, a reduction in the charges made for the service rendered; second, an improvement of the service; third, an improvement in the conditions of labor; fourth, and most important of all in my opinion, the fact that, with the establishment of ownership and operation of all public utilities the city governments would be free from the influence of those seeking the right, upon most favorable terms, to privately own and operate public utilities. This would give the cities of this country a chance to grow and to develop governments, the privilege of serving in which the most prominent and capable citizens would seek.

THE UTILITIES BUREAU

BY FELIX FRANKFURTER,

Law School, Harvard University.

Mr. Chairman and Gentlemen: I have been asked to elaborate the obvious. There is one factor in all this problem that we can all agree upon, and it is a vital one frequently overlooked. It is just this: that there is not an identity of interest between the utilities and the community which the utility serves. The interests are conflicting, not identical; there is, however, a need of composing or adjusting these different interests. From that follow several necessary implications. The way to compose different interests, the way to reconcile conflicting interests, is, according to the theory of Anglo-Saxon law, a balanced representation of those interests.

In order to have a balanced representation there must be full possession of the facts on each side necessary to the decision of each case. Up to date, gentlemen, the opposing interests have not been well balanced. There is concentration of ability on one side but lack of concentration of ability on the other. Concentration of ability and intelligence on the part of the utilities, but lack of concentration of ability on the part of the community. The reason is plain. The jurisdiction of our municipalities must stop at the limits of the city line. The interests of the municipalities, however, extend beyond the city line. There must therefore be devised some machinery outside of the local structure to meet that gap between need and power. Recognizing that difficulty, Mayor Blankenburg and his associates have proposed and suggested the formation of the Utilities Bureau. The Bureau thus suggested is to serve as a way out of the difficulties in which several municipalities find themselves today. I will take a few of the many examples. The city of New York is about to attempt to secure a reduction in the telephone charges in the city of New York. The telephone company has been through that conflict in other cities, and is well equipped with the results of such litigation as to costs and valuation, while the city of New York has not those facts. In order to get them, it must spend an amount of money and time out of all proportion to the need of the situation.

The city of Boston is recontracting its relation with the Edison Electric Company. There is a stall, there is a block, in the whole situation, because the company insists upon a price of \$87.50 per light a year, and the Mayor of Boston thinks that is fair, but several city associations and organizations insist, and Mr. Cooke, Director of Public Works of the city of Philadelphia agrees with them, that the necessary light shall be secured at a maximum of \$70 a year. Isn't it absurd to think that the Mayor of Boston should be in a conflict with the Director of Public Works of Philadelphia, as to the present-day fair value for electric light per year? Surely these are facts that are demonstrable in this stage of the art, upon authoritative finding of an authoritative body.

Therefore the function of the Utilities Bureau in the first place is to get the facts, in the second place to spread the facts, and in the third place to use these facts to further efforts of the various municipalities, in fights that occur from time to time, either in securing necessary legislation, or in securing necessary regulation. In other words, the Utilities Bureau is a device, a modern device, of administration to meet a very practical situation. It is a device to use organized intelligence in the management of one of the most important phases of city affairs. As such I commend it to you.

REPORT OF THE COMMITTEE ON RECOMMENDATIONS

We congratulate the cities and people of America upon the candor and fearlessness with which their representatives have in this Conference faced the problem of the relation of the public to public utilities. The Conference has been helpful in its interchange of opinion and experience, and especially in its development of the idea of the community of interest among the cities. With that made plain, we can now proceed with a program of inter-city helpfulness which must be the permanent outcome for good from the Conference.

We recommend:

That no general conclusion be formulated upon the abstract question of municipal ownership, but rather we express our judgment to be that municipalities should be given, in all instances, the power to municipalize public utilities, the expediency of its exercise being at any time and place, and with regard to any particular utility, a matter for local determination.

That we make no general determination as between State Board and Local or Home-rule regulation of public service corporations; that we do, however, declare that the franchise-making power should in all cases be local; that municipally owned utilities should be subject to local control only; that in large cities local regulation is plainly to be preferred; and that, in all cases, the principles of home-rule should be preserved by at least leaving it to the people of a city, of whatever size, to determine whether they desire to act for themselves or to call in a State Board, if one exists, either to regulate or to aid the local authorities in regulating privately owned local utilities.

That we endorse the idea of the establishment of the Utilities Bureau, as a nation-wide inter-city agency for bringing the combined ability and experience of all our cities to the service of each city which may face a public utility problem. Through it, we meet the combination of private interests with a combination of public interests, and to the specialized experts which private interests thus mass in defence of one another, we oppose the skill, experience, and resources of the united cities of the country.

We recommend:

That the trustees of the Utilities Bureau proceed to its further organization, outlining a plan by which its support may be assured and its services made available. In this connection, we suggest, for the consideration of the trustees, that an office be provided, records kept, experts be employed, and that cities, which can legally do so, contribute on some equitable basis to the expense of the Bureau, in excess of its earnings, when in the service of cities actually using its facilities in the solutions of particular problems.

We vote our hearty recognition of the public service performed by Mayor Blankenburg in calling this Conference; to Mayors Mitchel, Harrison, Shroyer and Baker, for their sympathetic assistance to him; our appreciation of the gracious hospitality of the city of Philadelphia, and our thanks to the American Academy of Political and Social Science.

Unanimously adopted Saturday, November 14, 1914.

The following members of the Conference served on the Committee on Recommendations:

Hon. Newton D. Baker, Mayor of Cleveland, *Chairman*.

Hon. John Purroy Mitchel, Mayor of New York.

Hon. H. C. Hocken, Mayor of Toronto.

Hon. T. C. Thompson, Mayor of Chattanooga.

Hon. Frederick W. Donnelly, Mayor of Trenton.

Hon. John M. Eshleman, President, Railroad Commission of California.

Hon. Milo R. Maltbie, New York Public Service Commission, 1st district.

Hon. Edward D. O'Brien, Director of Utilities, Seattle.

Hon. Charles E. Merriam, Alderman, Chicago.

Mr. Theodore F. Thieme, Citizens' League of Indiana, Fort Wayne.

OPEN DISCUSSION

MR. F. C. HENDERSCHOTT, New York Edison Company, New York City:

I am glad to have the opportunity to speak. I am a private citizen; I do not own any stock in any utility corporation, but about two years ago it was my good fortune to inaugurate a movement through which corporations are training their employes.

I believe the function of a government is to govern and regulate, and not to conduct business. I have felt during the last two days, as I have attended your sessions, that you have not been quite fair to the man who is a director in the big corporations; you have not been quite fair to that element in the directory which is honorable and square, and which means to do the right things. I refer to those men that you would not hesitate to go to, and who would be the first men that you would go to if a proposition was up which involved the future of your city. You have run a little bit riot on one side of the proposition.

There are in the United States today over eighty of the great corporations, with a combined capital of \$3,000,000,000, with employes in excess of 1,000,000, that are training their employes at their own expense to render a better and more careful grade of service.

When you speak of getting better service from employes, who are under municipal government or the United States Government, just kindly take the time to refer to the recent reports of the Postmaster General, and some others, and find out what the possibilities are of getting a higher grade of service from political employes than you can get from employes of private corporations.

Of course, you have one expediency left; you can go to Washington, introduce a bill, and change human nature, but you won't get a higher grade of service from people whose principal effort is to get their job and get under civil service rules than you will from people who have to render an account day by day to hold their jobs and be promoted.

There isn't any question but what the corporations have done wrong. We all know it. The Sherman law was a dead letter for years, but as the gentleman who has just preceded me said, you will have no trouble in getting all you are entitled to from a cor-

poration, if you go at it right. The government today has all the authority it can ever have. It can delegate this authority to its public service commissioners, and it has so delegated it, and we have honest, faithful public service commissions who are working on these tremendous problems. We have public service commissions in forty-five of the states, many like the ones in your state, just recently come into existence. You have to be patient until those gentlemen can compare notes, until they can solve the problem of proper government regulation.

Will you have better regulation if you put your utilities under the municipalities? Can you have any more authority to regulate your utilities under municipalities than you have today under private corporations where you can bring them to time every time you go after them? It is not the business of the government of the United States to run the business of the United States. I want to sound just this note of warning.

When you go into the public utilities and take them over, you are going into a form of government that this country has never known, and I doubt if it is yet ready to accept. You can compel your public service corporations to render a high grade of service, and no one knows this better than they do, and no one is more anxious to render a high grade of service than the public service corporation that is awake and knows its business. You can regulate their securities, you can regulate their prices and you are doing it.

The problem is not yet complete. When you put the government into business, you are putting business into politics. I do not care whether in a municipality or in the United States Government. When you have taken over the railroads, and the other public service corporations, and put them into politics, you have a condition that you have not yet dreamed of in this country.

We hear all the beautiful sides of municipal ownership. I have lived in a town where they had municipal ownership. I live in a town where we had municipal ownership of the electric light plant, and we were mighty glad to get rid of it. There is no doubt but what municipal ownership, under certain conditions, can be made a success, but when you suddenly start a new form of government and enter into the big businesses, you are starting on a dangerous path.

In some places they have not stopped at that. In some places the municipalities have sold chicken dinners and ice cream cones

in their parks. In one city they even attempted to run a municipal newspaper. It failed, of course. If things are pushed to such an extent as that, what are you going to do with your people? What are you going to do with the people who are going to pay taxes, and do not have a municipal job? It is a big proposition you are considering here when you put the government into business.

The other thought is that I do not think this Convention has been quite fair to a great many men who have their money invested in big corporations, and who are honest, patriotic, full blooded, law-abiding citizens, just as honest and as faithful as any citizens of any kind, and just as anxious to coöperate with you for good government as they have been with this great movement to educate the employes for better services.

It is a tremendous movement this industrial educational movement, which is starting all over the country, and it has gone into our public school system. When you stop to think that only 4 per cent of the male population has had any high school training, you will get an idea of how important it is to educate your men and not turn them out every two years or every four years and put in another class of men that know nothing about it to run the government.

MAYOR BAKER:

I am the particular mayor who sold ice cream cones, etc., in the public parks. I only want to make sure that was not passed by as a flight of the imagination. I actually did it. We found in Cleveland that the private concerns were selling too little ice cream or too poor quality. They were adulterating the quality of all the supplies sold in the parks, and squabbling about the division of their earnings on the side. So we undertook to do it by the city. We appropriated by anticipation \$95,000 of the income we expected to get from the sale of those supplies, and purchased the supplies and actually made some \$12,000 or \$15,000 profit in a single year. We sold more ice cream, of a better quality, of a pure and sanitary character, at less than the previous price to each customer, and a purer and a larger quantity of candy, and pop corn and everything of that sort was really sold.

The cleanliness of the surroundings was certainly greatly improved, and while it may have been a wicked invasion of the province of private enterprise, I am quite certain that the people of that

particular city would not be willing to go back to the private sale of confections and kindred things in the public parks.

MAYOR SCANLON:

I have made the statement in my own city that I had the reputation of never missing an opportunity, but as a matter of fact, I have missed one or two, and everybody laughed, and that is the reason I am on the floor now, because I am not going to miss any more. I have listened to the discussion of utilities with a great deal of interest yesterday and today, and I have heard some papers read, and some speeches that were radical in some directions.

As I stated yesterday in a few remarks I made, I am from the mountain state of West Virginia. I am mayor of a little city of 50,000 people. We have all the public utilities owned by private corporations, and we have all the big corporations represented. We have the Standard Oil furnishing us natural gas, that is, through a subsidiary company known as the United Fuel Company, the American Railways Company running our trolley cars, and the American Guarantee and Water Works furnishing water. We have all the big private utilities corporations serving us in our public utilities, but we have not suffered so much. I am surprised that the great cities of New York, Chicago, Philadelphia and these other large cities say that they have suffered to such a large extent. I do not understand it, coming from a small community.

We do not issue any contract to any corporation through which they can put their foot upon our necks. We do not grant franchises by which these great corporations can put their foot upon us. We have 6 cent electricity, 4 cent car rates and 15 cent natural gas, in spite of the fact that the Standard Oil Company is furnishing it for us.

We went out into the country and leased several thousand acres of gas land, and we raised by subscription of 105 thousand dollar lots, \$300,000 inside of twenty-four hours. We are boosting; we are building a city right; we are looking after our people. We do not need to fear the Standard Oil Company, the American Railways Company or the American Guarantee and Water Works Company or any other company. If we need their services, we use them. We have state regulation, we have a good state board; it was appointed by the governor. I heard people say upon the floor of this convention yesterday that they are liable to be politicians when the governors appointed them. Perhaps they are politicians, but

they are practical men. Just as practical as every other man. The governor of our state is a Republican; he is a partisan Republican, and I am a very partisan Democrat. Yet that governor has given us a good board, and the city has taken good advantage of it. We do not have to bother with local laws; because we deal with these questions ourselves. We deal with them right at first hand. We are going to buy our water works and we are going to do that within the next ten years. We believe in municipal ownership, but we have no fear of any corporation in the land.

We go after these corporations and we make them know we are on the earth, and I believe you ought to do the same thing and just use your state regulation. It might be well enough for Philadelphia, New York and Chicago to have those regulations, as they do in cities of 50,000, 75,000, 100,000 or even 200,000, and if the privately owned public utilities become too independent, the people go after them with state regulation; get municipal ownership as fast as you can, but don't get it in too big a hurry. Don't be afraid of the public service corporations, for they are a very necessary evil in three-fourths of the cities of this country, because we need their help and their money to build the city before we take it entirely out of their hands.

HON. GEORGE N. SEGER, Mayor of Passaic, New Jersey:

Mr. Chairman, and Gentlemen: As a representative of the smaller cities of the state of New Jersey, which is served by the public service corporation in its railways and its electric lights and power, and its gas, I want to say that this entire conference, to my mind, has resolved itself into this: that both the public service corporations and the representatives of the cities have the same motives, that is, to get the most for those whom they represent. The only difference has been that the public service corporations have approached their motives in a scientific manner, and the mayors and representatives of the various cities have gone about this thing in a rather more or less haphazard way.

The city of Passaic, some years ago, was paying \$1.10 per 1000 for gas. We believed that gas could be produced cheaper. I am not a believer in the statement that the public service corporations are conceived by the devil, nor do I believe, as has been stated by some of the speakers, "that public utilities commissions created by the state are not always loyal to the people."

But I do believe the fact is this, that when the people go before the public service corporations and public utilities commissions, they oftentimes go without any preparation. The city of Passaic believed that in order to go before the public utilities commission, in an effort to get the rate reduction, they should come prepared. The experts that the public service companies employ are well equipped and experienced in this work, and we thought we should make preparation in the same way, that is the getting of information.

This conference is going to resolve itself into a bureau of collecting information which will be available to the smaller cities who can ill afford to hire high priced experts.

It was a common occurrence for me to go down to Trenton to attend hearings before the public utilities commission and see an array of council representing the public service companies, representing an aggregate salary of \$200,000 a year, while the city had appropriated only about \$5000 for its fight against them.

It does not make any difference as to how the public service company was disposed toward the city of Passaic at that time, nor that the public utilities commission of New Jersey was able to assist us, the fact remains that we, the city of Passaic, collected and presented figures and facts, which secured a reduction in the price of gas from \$1.10 to 90 cents per thousand, and not only did the city of Passaic benefit by such reduction, but the entire state of New Jersey.

I want to say at this time, on behalf of the city of Passaic, that I will submit to the Utilities Bureau all that information, which cost us \$5000, for their use, and I hope the other cities will contribute in a like manner.

HON. D. W. NEVIN, Mayor of Easton, Pennsylvania:

I wish to speak to this convention for just a few minutes, representing as I do, the captains of industry, as well as the governors of the municipality.

I have been, during the period of thirty-five years, eighteen years in public service, and an officer of municipal corporations, and during that thirty-five years I have been a representative in every capacity of a public utility corporation, representing as I have, and as I do now, as many as five corporations.

I had thought, as I heard these remarks made before this convention, that all bad organizations were confined to New York and Philadelphia, but I am now of the opinion that the West can go us

one better, of all that we have heard here of conducting of corporations by municipalities.

I believe that there is one thing that this convention has discounted, and that is the fact that the privately owned corporations have made the cities, which we represent, what they are today, and it should not be forgotten.

I do not believe in this age of legislative insanity and investigation of all kinds that we should suddenly place upon the cities all private corporations, for management, when a few restrictions will correct all the evils of which we complain.

I learned when I went to Sunday school that there were two things necessary to live an upright and honorable life: one was to obey the Commandments, and especially the Commandment which says, "Thou shalt not steal"—and the other was to obey the Golden Rule, to do unto others as you would have them do unto you; and that should apply as well in the management of corporations as in private matters.

I built a railroad twenty-six years ago, and I am operating a part of that road today and have for the past twenty-six years. I am also the mayor of the city through which that road runs, and it forms a part of, although I am not connected with it, one of the best conducted trolley roads in the country. I have been connected with the electric light company, and I have been connected with the gas company, and I have had much to do with water companies, but I have never seen yet where honest men were put at the head of any private institution and obeyed the laws of the land that there was any cause for any municipal interference with the conduct of these corporations.

There is much that I could tell you on the part of the public. The public are not all angels; far from it. If I could tell you of some of the cases which have come up in my own observation, you would be surprised to see what small people there are in a community, that a large corporation has to deal with, and if a private corporation has to deal with such characters, much more will a municipally owned corporation, that will be subject to all those men that want to be in office, have to contend with.

I say we ought to be, at least, just, honest and fair. We ought to consider the people who have made this country, and their interests should not be subjected to a course of treatment that will paralyze this country.

REMARKS OF HON. THOMAS L. RAYMOND, MAYOR-ELECT OF NEWARK, AT SESSION OF SATURDAY EVENING, NOVEMBER FOURTEENTH

Mr. Chairman, Ladies and Gentlemen: It affords me great pleasure to receive this great distinction of the meeting tonight, and especially so, as I am not yet a mayor. I am a near-mayor, or a mayor-elect, but I have enjoyed very much this wonderful demonstration of interest in this wonderful beginning of a union of our municipalities.

It is not for me to say anything here tonight, as we have able speakers who will present their views. It also is for the chair, it seems to me, to maintain a sort of judicial attitude toward the matter, as I suspect that the views of the speakers do not entirely agree with my own, but I take great pleasure in introducing to you a gentleman who is the law associate of the Honorable Elihu Root, and who is the Counsel for the Consolidated Gas Company of New York, Mr. Charles F. Mathewson.

HOLDING COMPANIES AND THE PUBLIC WELFARE

BY CHARLES F. MATHEWSON,

Of Counsel, Consolidated Gas Company, New York City.

I understand a "holding company," as we employ the term, to indicate a corporation controlling the properties and management of another (known as an operating company) through ownership of the stock of the latter, as distinguished from direct title to the properties of the latter. The holding company may be solely such, or it may be to some extent an operating company itself.

I further understand that "anti-trust" and "anti-monopoly" laws are not involved in this discussion; but that the question involves the effect upon the public welfare of control by capitalists of operating properties through the medium of a holding company rather than through direct ownership of such operating properties, where such control or ownership would not involve the violation of the statutes mentioned. I shall confine my thought to holding companies affecting "public utilities," particularly those of a local character, such as gas, electric, water and street railway enterprises.

To consider the relation of "holding companies and the public welfare," it is necessary to approach the subject from an unprejudiced standpoint; and so far as that qualification goes I feel that I possess it. I neither "see red" nor am I filled with unusual joy on hearing the expression "holding company." I have no prejudice either for, or against, such a device. I am, however, impressed by study and observation with the truth of the proposition that any business movement of such vast proportions as the development of holding companies within the last fifteen years must rest upon some broad economic foundation. It is history that such movements are commonly based upon the necessities and progress of business evolution, and that at the outset they represent a real advance and an instrument of efficiency. The great majority of business men, even men of large business, are not "malefactors of great wealth" or otherwise, but plain humans endeavoring to develop their activities to meet the actual and proper calls of the public, by improvement of service through employment of legitimate means. This tendency

explains beyond question the origin of the device known as the "holding company," whatever may be thought of its use or development or possible abuse thereafter.

The holding company has undoubtedly in some instances been perverted to bad ends. An illustration, on a colossal scale, appears in the exploitation of the Chicago, Rock Island and Pacific Railway, where one holding company was formed for the purpose of acquiring the stock of the railway company by the issue of collateral bonds, and a second holding company was formed to acquire the stock of the first holding company under a charter by which the entire control of the latter and consequently of the railway company itself was assured to the holder of the preferred stock of the second holding company, representing but a small proportion of its entire capitalization. Such a scheme is its own executioner, as the existing situation of that enterprise forcibly demonstrates.

Then, too, there is the holding company that is merely useless; it is of no particular value economically or in any line of efficiency; it exists only because someone prefers that method of control; it is simply a fifth wheel to the coach. While I have no use for a fifth wheel to my coach, I am not disposed to get out of patience with any man who prefers one for his, or to try to prevent his using one if it pleases him and does me and the community at large no harm. It is, and for that matter ought to be, part of the liberty of the citizen to do harmless things in foolish ways if he prefers, rather than to proceed wisely, provided he does not injure his neighbors by his action.

But the great majority of holding companies exist to meet a real need; they add immensely to the development and the efficiency of the service of public utilities, and inure enormously to the benefit, not only of their immediate customers, but also of the entire communities in which such utilities are located.

Facility of Financing

In the first place, holding companies make possible the procurement of capital in the development of public utilities throughout the land which would be developed either not at all, or incompletely and inefficiently, but for the existence of such a device. Very few communities, even large ones, are able to draw from their own resources

funds adequate to construct and develop public services of the highest and most progressive type. Almost invariably capital is sought from without; and it is above all things desirable, and especially for those sections of the country which are less fully developed, to be able to tap freely the reservoirs of capital in the older and richer sections of the Union and abroad.

To secure the advancement of funds requisite for these purposes, capital must be consulted as to the method of procedure which it prefers to pursue; it is not something which can be commandeered willy-nilly; the only options presented to it are either direct investment in local plants, frequently broadly scattered, or investment in a holding company which shall control them at a common centre by stock ownership and advance funds to them in return for their securities. But capitalists do not as a rule care, or are willing only to a limited extent, to make comparatively small investments here, there and elsewhere in different communities of the Union, in such a form that they must keep their eyes upon each particular investment through representation on the board of directors or otherwise, in order to see that it is handled and maintained in such a manner as to insure a fair return on the investment. They prefer to make this investment in the holding company, whose officers and staff will exercise control and supervision of the subsidiary companies to which it may advance, relieving the investors of that responsibility and burden.

Moreover, great holding companies, such as many which I might name, and the names of which will spontaneously occur to my hearers, which hold the stock of public utility corporations and supply their needs in the way of electric current and otherwise, at various points throughout the Union, by reason of their prestige and financial strength are able to command in the centres of finance capital which it would be impossible for a local enterprise, thousands of miles from such centres and with no particular reputation with investors, to secure except at very high rates of interest if at all.

Safety of Investment

Moreover the capitalist, and especially the smaller investor whose means are not sufficient to allow him to embark in more than a single local enterprise if he were to take an interest therein directly,

very much prefers in the interest of safety an investment in a holding corporation whose property interests are diversified as to territory or character, or both, covering plants at five, or ten, or fifty different points, on the ground that if failure should occur at one, prosperity may be expected to follow at another, so that on the doctrine of averages his investment will still be reasonably safe instead of under the hazard of being wiped out by an unfortunate venture in a single plant.

And since, according to the decisions of our highest courts, a fair return upon capital depends to some extent upon the hazard of the investment, it will at once appear that if through the medium of a company holding scattered plants the hazard of the investor is rendered less than it would be if his eggs were all placed in a single basket, he would be willing and could perhaps be compelled to accept a lower rate of return upon his capital. So that the employment of the holding company, with its reduction of individual hazard, may reasonably be expected to inure to the benefit of the customers of the operating company in the shape of lower charges for service.

Greater Efficiency

Again, a holding company of large resources can and usually does command engineering and executive skill of a quality, and can acquire supplies in wholesale quantities at a price, and frequently controls sources of energy which it is able to distribute at a rate per unit, impossible to a local company relying upon its own resources.

The result of these advantages, so far as it concerns the subsidiary companies, should be and I think as a rule is, a more efficient operation, under more skilled supervision, and a more rapid extension of service to the communities affected than would otherwise be possible. Thus a great electric company is able by reason of the larger investment which it can make in plant, to produce power and other facilities for manufacturing and commercial concerns, not only within a fixed municipality but outside of its limits and adding to its growth, at a rate of progress and of charge for service unknown to the purely local enterprise; with the result of a community development and prosperity which could never have been secured under the cramped and limited conditions theretofore prevailing. Such use of the product for manufacturing and commercial purposes, as

well as for illumination, increases greatly the "load factor" and the output per unit of capital investment, and consequently reduces the cost per unit of the product, with the possibility of a reduction of rates to old consumers as well as the furnishing of additional facilities to new enterprises.

Thus the United States census report of 1912 as compared with the like report for 1902 shows a reduction in cost of current at commercial electric stations from 3.4 cents in 1902 to 2.5 cents in 1912, or more than 25 per cent, due largely to the development of holding companies, with immense plants and economies of production per unit which they have been able to accomplish. As showing the relative efficiency of such companies it may not be amiss to observe that municipal electric lighting stations within the same period by the same two reports show an increase from 3.6 cents in 1902 to 4.3 cents in 1912.

Legal Considerations

But there are other and important reasons for the existence of holding companies, rather than direct ownership of scattered plants by a single corporation. Scattered public utility plants in many instances could not be directly owned by a single company, even if investors preferred direct ownership to ownership of stock in local plants by a central company. By the laws of a great part of the states of the Union a public utility such as a gas or electric or railway company can operate only under a charter granted by the state in which it is located; in many, franchises to operate in public highways cannot be exercised except by a corporation of that state; and, if in any states a public service corporation might be directly operated by a foreign corporation, it would be only under inconvenient and undesirable conditions which would tend to discourage rather than invite free investment of outside capital.

Again, the property of an existing public utility corporation could ordinarily be directly acquired only by unanimous consent of its stockholders or by vote (in some states) of two-thirds or some other very large proportion thereof. But a group of capitalists making a specialty of the management of such utilities, may not care to make so large an investment in particular plants for two reasons: first, they prefer to acquire simply a majority of the interest in individual enterprises so that their resources may be devoted to

a larger number of plants, and in the second place they prefer to have a portion of the enterprise remain locally owned, on account of the touch which may in that manner be maintained with local interests and sympathy. Moreover, it is a matter of common knowledge that holders of some part of the stock of a public utility will commonly hold out for a prohibitive figure, even if the new investors are willing to acquire an entire interest in the local enterprise. The minority holder in the local enterprise, is protected by the circumstance that the purchasers of control can obtain a return on their investment only by such management and improvement of the property as will pay a return to all stockholders alike.

Moreover, many, and probably most, public utility corporations, are compelled from time to time to exercise the power of eminent domain; to condemn property or rights of way for efficient operation; and in most if not all of the states no corporation foreign to that state can exercise such powers. Without this authority, a foreign corporation, even if otherwise legally qualified, would be constantly hampered by the necessity of acquiring necessary rights at any exorbitant figure which the owner thereof saw fit to charge, the natural tendency of which would be to increase expenses of operation, or the amount of capitalization upon which the rates paid by customers must provide a return.

Distinction between Public Utilities and Other Corporations

The holding company, so far as it relates to public utilities, is not open to the objection which has been strongly urged against holding companies in commercial business. A commercial holding company, or operating company for that matter, may do business in and send goods into every other state in the Union; it may cover such states with its salesmen, whose operations may not be interfered with by any state without violating the law giving the federal government exclusive jurisdiction over interstate commerce; it may be located in Pennsylvania and not have a dollar of investment in any other state; it is dealing directly with any number of citizens and entire communities in such other states; and yet if anything in its action is subject to condemnation it cannot be reached by the courts of the other states whose citizens may have suffered, and virtually the sole remedy lies in the invocation of the federal statutes

known as the "anti-trust laws," with the Sherman Act at the head, which may have no application at all in the situation.

But a public utility corporation, even though all its stock is owned by a corporation located in another state, must from the very nature of its business, be located in the community which it serves; there are its property and its operations; there are located its offices which deal with the people; its rates and service and methods are subject to the regulation of the state where it is located, through the commission or other administrative body given jurisdiction in the premises; and it is just as amenable in every respect to the authorities of the state as though every dollar of its stock were owned by citizens of that state.

Indeed, if the stock of such a public utility corporation be owned by a foreign corporation, the situation is distinctly better than it would be if the foreign company had acquired the assets of the operating company directly instead; for in the former case the orders of a commission or the judgment of a court in relation to the operations of the public utility can be served directly upon the corporation owning the property, because there is a local corporation; while, if the property is directly owned by a foreign corporation, any proceeding of the state authorities would be simply *in rem*, against the local property alone, and the corporation owning it might be for all other purposes entirely beyond the jurisdiction of such authorities. The foreign corporation owning directly the assets might snap its fingers at the local authorities, except as to the immediate property upon which such authorities could place their hands; while in case the property was owned by a local corporation and the stock of the latter by a holding company, the state would have every legal and personal remedy against the local corporation which it could have if its stock were altogether owned by individual residents, the courts not recognizing the location of the stock ownership as at all material in determining a remedy or judgment against the operating company.

Conclusion

In conclusion the belief is expressed that the centralization of financing and management which is made possible by the holding company, or which is made possible by a centralized holding by any other method, is of vast and growing importance to the development

of the country in the line of public utilities and the activities of the community which are dependent thereon or connected therewith.

The element of destruction of competition which is said to lead to monopoly, is not present; for scattered public utilities at different points never, or only in rare instances, could be competitors with each other.

Moreover, being subject to state regulation, their charges to and treatment of consumers may be controlled for the public good, and in certain public utilities at least, a regulated monopoly is more conducive to the convenience and good service of the public than any amount of competition.

The holding company has come to stay, because it ought to stay; because it is an instrument of progress and efficiency and development; and its elimination would be a misfortune whose consequences would be difficult to calculate, but certainly immense.

PUBLIC ADVANTAGES OF HOLDING COMPANIES

BY FRANCIS T. HOMER,

Of Bertron, Griscom and Company, New York City.

By the term "holding companies," as hereafter used, it is intended to mean only those holding companies which acquire the stocks and other securities of public utilities, and under the term "public utilities" we intend to include only gas, electric light and power, street railway and heating companies, thus excluding any consideration or discussion of holding companies in the industrial or railroad field and also of holding companies in connection with telegraph and telephone utilities, for the reason that with the latter a large factor of their usefulness and value results from inter-community communication, whereas, at this gathering, being a meeting of the mayors of cities, we are interested in the utilities with localized activities directly affecting the prosperity of municipalities and the comfort and convenience of the inhabitants thereof.

So restricted, holding companies are distinctly peculiar, in that their investment is made in the securities of subsidiaries which have come to be generally, if not almost universally, recognized as natural monopolies.

Justice Peckham, in the case of *Willcox vs. Consolidated Gas Co.*, 212 U. S. 19, 49, referring to the Gas Company, said:

It is a corporation which, in fact, as the court below remarks, monopolizes the gas service of the largest city in America and is secure against competition under the circumstances in which it is placed, because it is a proposition almost unthinkable that the city of New York would, for purposes of making competition, permit the streets of the city to be again torn up in order to allow the mains of another company to be laid all through them to supply gas which the present company can adequately supply.

President Wilson has said that "Public Service Corporations are in a very interesting sense natural monopolies."

B. H. Meyer, of the Interstate Commerce Commission and formerly of the Wisconsin Railroad Commission, in his article in the *American Political Science Review* for August, 1911, p. 374, says:

There are few things which the industrial history of advanced nations proves more conclusively than that competition in the field of public utilities has failed to insure reasonably adequate service at reasonable rates.

For many additional citations of the best thinkers in this field, I would refer you to the appendix to the brief submitted on behalf of public utility holding companies to the Interstate Commerce Committee of the U. S. Senate, in the matter of Senate Bill No. 4160.

Of the thirteen states which, in 1910, were the most populous in the Union, eleven have established a public policy in restriction of competition in the public utility field.

The holding companies under consideration tonight, therefore, have none of the vices of holding companies which have been condemned by the courts in connection with railroad, industrial and other enterprises.

Public utility holding companies are not organized to restrain competition or create monopolies. Whilst occasionally they may acquire competitive utilities in one community, this is not the special object and purpose, nor their usual field of activity, but, even in this exceptional case they are not an instrumentality for the elimination of competition, for real competition between public utilities is neither obtainable nor even thinkable and the inevitable outcome of its attempted creation is consolidation and merger of such utilities. The holding company is an unsatisfactory substitute in such instances to accomplish the advantages reachable through actual and complete merger.

The most serious charge brought against holding companies generally and, therefore, including such companies as we are considering this evening is that they afford a most convenient means for over-capitalization. That public utility holding companies like those in the industrial and railroad field are susceptible to this abuse cannot be denied, but, on the other hand, such holding companies do not offer the same opportunities for over-capitalization because the history of investments in public utility corporations has been one of almost uniform growth in the volume and security of the earnings and not one of large fluctuations. The history of these investments, therefore, provides nothing for a would-be promoter's imagination to capitalize, but, aside from this, the capitalization of a holding company has no effect upon the subsidiaries.

The over-capitalization of operating utilities may, and even does, become prejudicial to the public welfare. Such over-capitalization, however, of the operating company itself, is not facilitated in any manner by the instrumentality of the holding company. It can as readily be done and is as a matter of fact more likely to occur where the company's stock is held by individuals.

Unlike large industrial and railroad holding companies, public utility holding companies do not result in the centralization of large power in their officers and directors, for the reason that they are usually so financed as to provide them only with such an amount of working capital as can be profitably employed in temporarily financing the subsidiaries, so that, in adverse times, the bonds and preferred stocks of the subsidiaries need not be sacrificed and so that, even in good times the disposition of the securities of the subsidiaries can be postponed until the investment made therein has demonstrated the increasing earning power of such subsidiaries and the higher market values which their securities should command. They afford no opportunity for shifting business activities from one corporation to another, as in the industrial field a plant here is closed and a plant there operated overtime to meet demands.

On the other hand, these holding companies, representing the ultimate equities in operating public utilities can command capital when the separate operating companies could not so do through the sale of their common stocks, for the reason that any conditions local to any one operating company may destroy the earning power of its common stock temporarily, and this risk makes the investment in such stock more or less speculative, whereas, it is unlikely that such reverses would overtake in the same year all or even a considerable part of 20 or 30 operating companies, whose common stocks are held by the same holding company and whose activities are in widely separated localities. The advancing prosperity and increasing earnings of the many subsidiaries not subject to such set-backs counterbalance and, in fact, in all holding companies of magnitude have uniformly exceeded the deficits from time to time encountered in their various subsidiaries.

It is the law of average making for a greater uniformity of returns and increased security thereof at the cost of a reduction in speculative, abnormally rapid possible growth. Such holding company is based upon the sound historical assumption that while

the utilities of any community by municipal calamity or drastic rate regulation may suffer a temporary or even serious set-back, the average of all municipalities and, therefore, of the utilities serving them will be in the future as in the past one of constant growth and gain.

The Ohio floods brought distress to many public utility companies, resulting in a total stoppage of dividends on their stocks and even in some cases deficits in meeting fixed charges, which caused marked hardships to the individual investors in such properties. The stocks of many other of the public utilities affected by those floods were held by holding companies and, whilst they, as separate properties caused corresponding losses to the holding company which they would have caused had their shares been owned by individuals, the increasing returns on other properties not affected by such calamities caused the holding companies to show, nevertheless, an increasing revenue applicable to their common stocks.

Public utilities, being actual monopolies, are deprived of the vitalizing effect of keen competition so essential to aggressiveness, energy and efficiency. A holding company restores this incentive to its various subsidiaries: for the unobtainable actual competition, it substitutes comparative competition in every department of the operating companies, for the reason that the results obtained by each separate subsidiary are carefully tabulated in parallel columns for comparison with the corresponding results attained by all of the other subsidiaries. These comparative tables, which are forwarded monthly to all of the division heads of each subsidiary, constitute an index of the results obtained and the service rendered and disclose with unerring accuracy which of the subsidiaries are operated in the most efficient and satisfactory manner.

It can be said without fear of contradiction on the part of men of experience that the average of operating economy and efficiency is materially greater in the public utilities which are subsidiaries of large holding companies than in the isolated, unaffiliated companies, locally owned and controlled.

The advantages arising from uniformity of accounting, from the purchasing of material and supplies in volume at wholesale prices, from the use of the greater credit enjoyed by the holding company, are self-evident; whilst, on the other hand, the holding company, by apportioning the expense amongst the aggregate of

its subsidiaries, can provide a staff of consulting and advising engineers of a calibre, ability and experience which separate and isolated companies, except those in the eight or ten of our largest cities, could not afford to command or employ. Such engineering supervision and advice guarantees the installation of the most modern equipment; the introduction of the very latest and best economies and the maintenance and operation of the plant in the most efficient and capable manner.

The holding company becomes a clearing house of the difficulties, the problems, the experiences, the solutions and achievements of each subsidiary and thereby each has the benefit of the cumulative wisdom and experience of all. It is unfortunate that this coöperative helpfulness has not resulted in some association of the holding companies, to the end that the departmental heads of the holding companies might further enlarge their field of knowledge useful in the service of the public, by a mutual interchange of experiences had and of difficulties encountered and overcome.

What has been said, while incomplete, is a sufficient summary of the important features of holding companies in this field necessary to a reasonably accurate understanding of their functions and purposes and should enable us to ascertain what their effect is in respect to public welfare.

Under the term "public welfare" we will not consider the question of investors in public utility securities as such, but the customers, consumers and patrons and the general effect upon the community in which the utility subsidiaries operate.

Technically, as a legal proposition, it would be clear that they have no effect whatever upon the public so considered. The latter are interested: (1) in adequate and efficient service favorably comparable with the best like service given under similar conditions in other communities similarly situated; (2) in reasonable and fair rates, having regard to the location of the property, a fair and proper return on the investments in the community and the conditions of advantage or disadvantage under which the local utility there operates; and (3) in the safety, comfort and convenience of both the public and the employes of the utility. These are the only matters in which the consumers and patrons of a utility are interested. There has never been a case involving any one or more of these three factors before a public service commission in which

the ownership of the shares of stock of the public utility under investigation has been material or even relevant to the inquiry and this is inevitably so, because, if it were otherwise, we would have a different rule for measuring the obligations of a public service corporation determined by the entirely immaterial question as to whether or not the shares were all owned by one individual or many, or by one corporation.

The courts, including the Supreme Court of the United States, have determined that the certificates of stock are merely evidences of a proportionate interest in a corporation: that for all purposes except controversies growing out of the contractual relationship between the stockholder and the corporation itself, the corporation represents each and all of its stockholders and, therefore, the stockholders are never either necessary or even proper parties in any proceeding involving the question of whether or not such company is furnishing adequate and efficient service at fair and reasonable rates with the proper safety, comfort and convenience to the public and its employees.

No power of control or regulation which a state, either directly, or through its legislature, or through a public service commission, or through any other delegated instrumentality, has, in respect of a public service corporation can be lost or curtailed by reason of the foreign ownership of its shares or the aggregate holding thereof by a holding company.

Although, therefore, from the legal viewpoint, holding companies are passive as to their effect upon the public welfare, neither adding nor taking away anything in which the public has an interest or right, when practically considered, they really become momentous factors for public good.

Nobody understands so well as the enlightened manager of a public utility holding company the fact that his subsidiary is deprived of the subtle, but, nevertheless, persuasive influence making for leniency and consideration towards a public service company, inevitably incident to the individual local widely distributed ownership of the securities of a public utility. Every stock and bondholder of such a public service corporation has his friends and these are not willing to join in the hue and cry making unreasonable demands or placing drastic rules and regulations upon a public utility in which local funds are so largely invested. This becomes

the more manifest with reference to the service almost invariably furnished by municipally operated plants, in that the public, being in its entirety interested in the same through the municipal ownership, never expects the same service and will submit to inefficiencies, uneconomies and want of helpfulness never extended to a privately owned and operated company. Again, through the tabulations of the operation of subsidiaries of the public utility companies, the officers and directors of the holding company interested therein have learned to appreciate that the growth and prosperity of the community itself are reflected directly in a corresponding growth and prosperity on the part of the local operating public utilities and that that public service corporation best serves the interests of its security and stockholders and, therefore, of the holding company, which best serves the community's interests. No independently-owned public utility corporation can be as helpful in the upbuilding and serving of its community as one which, by reason of its being owned by a holding company can, through the central managerial, engineering, accounting and commercial departments of such holding company, secure for itself the benefit and advantage of the experience had in other affiliated operating companies. Each measure, therefore, which is found in one community to increase the public good-will, to add to the efficiency of the service and the satisfaction given to the consumer, is promptly made operative in the other public service subsidiaries. It is immaterial whether such improvement in local service is due to altruistic or philanthropic motives, or from the selfish desire to increase revenues, so long as the communities secure the benefit.

The commercial department of these large holding companies in this pursuit of new business for each and all of the subsidiaries is constantly on the watch for business opportunities, is constantly seeking the location of new enterprises in the communities served by one or the other of the holding company's subsidiaries, in order to add to the number of customers and the volume of business and, thereby, through these activities, added growth and prosperity are brought to the communities served. The commercial department of a large holding company is certain to have a wider knowledge of such offering opportunities than it is possible to find in the best organized commercial department of a local, independently-owned public service corporation.

The Conference of American Mayors which is being held in Philadelphia is welcomed by the public utility people. There is nothing so harmful to the public service corporations as a lack of public understanding and comprehension of their functions, their duties and their rights.

The executives of American municipalities are very generally allotted too short a term of office to enable them, with their multitude of duties and obligations, to become thoroughly familiar with the public service corporations and their problems; and, on the other hand, by reason of the peculiar character of these problems of public service operations and difficulties, very few mayors can be expected to bring to such office the special knowledge which this line of business demands and requires. Whilst they and the general public no longer encourage the organization of competitive utilities with their inevitable short-lived rate wars, their subsequent consolidations with inflated security issues and then the impelling and unavoidable necessity for exorbitant rates in return for inefficient service in order to earn interest and dividends upon such securities, they do not understand and appreciate, on the other hand, the hazards of the business due to the tremendous strides made by invention and discovery, causing equipment, plant and machinery even to become uneconomical before an appreciable percentage of its normal usefulness and life is spent. They overlook the fact that installations have to be made with reference to the existing demand for service and a reasonable regard for the prospective growth: that the company cannot afford, nor would it be justified in making installations sufficiently large to be capable of meeting the demands for service during the probable full physical life of the installation and that, as the community and its demands grow from the standpoint of operating costs it is cheaper to abandon a small unit and install a large one, than simply to add successive units of limited capacity and that, therefore, the rule of law generally relied upon, that confiscation only occurs when the utility is deprived of a fair return upon the present value of its property engaged in the public service is unfair to the utility and injurious to the community that it serves.

In the face of an increase in the cost of materials, supplies and labor used by the public service corporation proportionate to the increased costs of such commodities and labor in other business

channels, the public service corporations have, nevertheless, steadily and uniformly reduced the actual cost of the service or commodity furnished the public. The greatest reductions in such charges against the public have occurred in the last twenty years and contemporaneously, therefore, with the growth and development of public utility holding companies. These companies have furnished the opportunity and the means for experimenting with every new idea that gave reasonable promise of better service at lower cost.

In the last twenty-five years, the average price of gas, for example, in Massachusetts has fallen $47\frac{1}{2}$ per cent; whilst the average price of electric light per kilowatt-hour in the last twenty years has decreased 48 per cent.

In the meantime, the effective usefulness of the gas, itself, has been materially increased, through the introduction of the incandescent mantle and the improvements of gas stoves, ranges and heaters, so that, with the reduced price per thousand cubic feet, there has also followed a reduced consumption to accomplish the same results.

In the electric field, the tungsten filament lamp has resulted in an energy saving of 75 per cent as compared with that used with the old carbon filament, whilst the efficiency of motors and the elimination of transmission losses in conductors have almost in the commercial field reached perfection.

The street car fare, it is true, has remained generally uniform at 5 cents, but, for the nickel today, the patron has the quick, comfortable, well-heated, well-lighted, electric rapid transit car, in place of the slow, uncertain, unclean, poorly illuminated and often unheated horsecar. Universal transfers have been generally adopted, whilst the street railways have extended their suburban lines to such an extent as to even reach and join the suburban lines from other municipalities, thus forming interurban connections, competing, through frequency and cheapness of their service, with the existing steam roads. The growth of the communities in which the street railways operate has caused the average length of ride to increase materially, without any advance in the fare.

That this tremendous advance in the public service field has a direct relationship to holding companies and that its being contemporaneous with their development is not a mere coincidence is evidenced by the fact that of approximately \$4,000,000,000

invested in street railways, 81.4 per cent is organized into or affiliated with holding companies; of the \$2,100,000,000 of securities outstanding in the electric light and power business, 82½ per cent is organized into or affiliated with holding companies; that of the \$1,300,000,000 of securities outstanding in gas companies, over 66 per cent is organized into or affiliated with holding companies, so that, out of approximately \$7,500,000,000 of gas, electric and traction capital, 78.5 per cent (over \$5,900,000,000) is now organized into or affiliated with about 140 independent holding companies, whose securities are today known and bought throughout this country and Europe.

Contemporaneously with the holding company's standardization of service, methods of accounts and financing of public utilities, there has come a recognition on the part of the experts as to the integrity, security and attractiveness of public utility investments.

The last annual report of the comptroller shows that for the year 1913 the investment holdings of the national banks in public utility issues had increased nearly 20 per cent over their aggregate previous holdings, whilst their investments in railroad securities decreased over 6 per cent.

This all means a growing confidence on the part of financial experts and of the investing public, that the attitude of the communities and municipal officials towards public utilities, and of those utilities towards the public, is gradually being established upon a basis of mutual understanding, certain to result in even-handed justice.

THE PUBLIC WELFARE AND THE HOLDING COMPANY

BY J. P. GOODRICH,

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I hold no brief for or against holding companies: That there are good as well as bad holding companies will be conceded. Some have been conducted along right lines and been powerful agencies in the development of our public utilities. Others have degenerated into mere schemes to multiply securities and sell them to confiding investors without any resultant benefit to the general public. My purpose is to point out some dangers to the public welfare that arise from the operation of holding companies.

Mr. Mead, in his recent work on "Corporation Finance," defines a holding company to be "a corporation organized for the purpose of acquiring the stock and other securities of other corporations" and states that "The primary purpose of such corporations is to effect a combination of allied enterprise which cannot be accomplished by the use of any one of the corporations it was intended to include."

In a recent conversation with a gentleman who had served a long and honorable career on the bench and is now one of the leading members of a public service commission in one of the states, I asked him to define a "holding company." He replied: "A holding company is a corporation created for the purpose of separating a gullible public from their money by the sale of watered stocks."

While I do not at all agree with the judge's definition, yet I am quite certain he expressed the prevailing opinion of the average man who has given no special consideration to the subject.

Perhaps the first real holding company of large size was the Pennsylvania Company, organized in 1870. Its purpose was to centralize the control of the Pennsylvania railway lines west of Erie and Pittsburgh. Its charter specifically authorized it to "make purchases and sales for investment in the bonds and securities of other companies." The owning by railroads of stock in other companies has been a common practice for the past fifty years, yet holding com-

panies as we commonly use the term are of comparatively recent creation.

Prior to 1888 the laws of no state clearly authorized the creation of corporations, the principal object of which was to own stocks and securities of other corporations, but when the legislative intent on that subject was expressed at all, such ownership was prohibited.

In 1888, when the corporation laws of New Jersey were revised, authority was granted to organize corporations for the general purpose of owning the stocks and securities of other corporations and from the enactment of these laws can be traced the origin of the modern holding company.

After the dissolution of the standard oil and other trusts by the courts, those interested in such properties began to look around for some method by which the same object might be accomplished—by which they might do indirectly what the courts had said could not be done directly. They found in the revised corporation laws of New Jersey the exact authority needed to accomplish their purpose and proceeded to organize under those laws. New Jersey soon earned the distinction of being the “mother of trusts,” and she was, indeed, a fruitful mother—the trusts big and little sought the protecting aegis of her laws and the revenues derived from this source soon contributed largely to the support of the state.

Not to be outdone by one of the sister states and being unwilling to see many of their domestic corporations surrender their charters and change their domicile to New Jersey, the other states adopted a similar practice, and many of them were soon bidding one against the other for the patronage of these corporations, which increased with marvelous rapidity and covered every line of manufacturing and commerce. The government soon began its relentless war on those holding companies, which, in its opinion, transgressed the provisions of the Sherman anti-trust law; the process of “unscrambling the eggs” is now well under way and those who desire to do so can easily keep within the law in the organization of companies of this character and in the conduct of big business.

Our special interest this evening is with respect to holding companies operating in the field of public service corporations other than railroads. When I speak of a holding company, I mean a holding company as defined by Mead, and do not refer to an “owning” or “management company”—to a corporation owning the corpus of

various public utilities, which supply from a central station many communities with light, heat, power and interurban railway connection. Such organizations are not holding companies in any sense of the term and no possible objection can be urged to them.

The holding company is comparatively a late comer in the field of public service corporations; while there were isolated cases prior to 1898, the great majority of holding companies have been organized within the last ten or twelve years. The rapid growth, both in number and extent, of public service corporations; the wonderful improvement in electrical machinery; the constantly widening area that could be supplied economically with electric energy and gas from a central station; and the steadily decreasing cost of the production of these modern necessities presented a most inviting field to men of large vision, who were not slow to enter and possess the land, through the agency of holding companies, and appropriate the fruits thereof to their own use. Plants operated separately at a loss or little profit, when joined together by transmission lines and supplied from a central station under the management of trained experts, returned handsome profits to the promoters, gave better service to the public and encouraged a wider use of their products.

This development has been by no means confined to holding companies, but the same degree of progress has been made by "owning" and "management companies." A large part of this development, however, has been by holding companies, as it was not only the simplest and easiest way of accomplishing the result, but promised greater profits to the promoters, with no limitation on the amount or character of the securities to be issued, except their own judgment as to what the earnings of operating companies would justify, and as to what the bankers, underwriting the issues, would be willing to sell.

The growth of holding companies in this field is strikingly shown by Mr. Gibbon in his testimony before the Senate committee when he stated that of the *eight billion* of public service securities outstanding, over *five and one-half billion* is held by holding companies. He also stated that over *three hundred million* of holding companies' securities were sold abroad last year. It further appears from the testimony before the committee that one-half of all the street railway mileage in the United States and more than thirty per cent of all the electric central station plants are under the control of and are being operated by holding companies.

Holding companies operating in the field of public utilities are not subject to the same criticism that resulted in the dissolution by the government of holding companies operating in other fields, for they are natural monopolies and competition is never desirable either from the standpoint of the public or of the investor. The public has learned from sad experience that, in the end, it is compelled to pay for unnecessary and unwise duplication of plants. For competition has been substituted public supervision of rates and security issues and, at this time, thirty of the states have in some form passed laws creating commissions to supervise public service corporations. Regulatory bodies usually are possessed with power to fix or approve rates; to regulate stock issues and to issue a writ of necessity as a condition precedent to the right to construct and operate a public utility.

The advantages claimed for holding companies, by their advocates, may be summed up under two general heads: (1) Greater operating efficiency, more efficient engineering and legal departments and more economical conduct of their purchasing departments; (2) Wider banking facilities and greater ability to market securities and finance the needs of subsidiaries.

It will be conceded, subject to certain limitations hereinafter noted, that, in the operating, engineering, management and legal departments, the holding companies possess certain advantages not possessed by small companies operating isolated plants—that there is a distinct advantage in any given territorial unit to join all the separate plants by transmission lines and serve them from a central station. In this way, the service of many employees may be dispensed with by the abandonment of the small stations; villages too small for a separate plant can be served; towns too small for continuous service can have the benefit of constant service previously enjoyed only by the larger cities; farmers along the line can and do avail themselves of the opportunity to use electric current for domestic and farm use; the load factor is greatly improved by reason of the diversified industries of the various communities served; an efficient engineering and repair corps may be retained and a system of comparative tests can be installed, so that, by reports and inspections, the most perfect and economic devices can be enjoyed in common and the performance of one plant used as a check on others, resulting in a competition of service, calculated to keep the local

management in charge of each plant keyed to the highest point of efficiency with the result that the revenues are greatly increased and the operating expenses decreased to a degree hardly appreciated by those not acquainted with the actual facts. These advantages, however, are not peculiar to the holding company. Every advantage claimed for the holding company can be obtained and is being obtained by *owning companies*, operating central plants and supplying the territory naturally tributary thereto. One of the best operated street railway plants in the United States, the Twin City Rapid Transit, is not owned or controlled by a holding company. The gas company giving as good service as any and operating with the lowest rates in our country, the Citizens Gas of Indianapolis, is neither owned nor controlled by a holding company. There is scarcely a state in the Union that does not have central station plants not controlled by holding companies, accomplishing all the things claimed for holding companies.

To illustrate by a concrete example: We have in the city of Indianapolis two lighting companies—the Indianapolis Light and Heat Company, operated independently, and the Merchants Heat and Light Company, operated by the Merchants Public Utilities Company, the stock of which is in turn owned by the American Public Utilities Company.

For the year ending June 30, 1914, the independent company's operating expense, exclusive of depreciation charges, was 54 per cent of its gross, while the Merchants company, operated by the holding company, was operated at 53½ per cent, practically the same ratio as the other and showing no special operating efficiency for the holding company over the privately-owned company.

The Indianapolis, Columbus and Southern Traction Company in 1912 was leased by the Interstate Public Service Company, a holding company, which is in turn controlled by the Middle West Utilities Company. During the last year of its operation as an independent and detached unit or, for the year ending June 30, 1912, with a gross revenue of \$421,433.36, \$208,673.56 was saved for net. For the year ending June 30, 1914, under the operation of the Middle West Utilities Company, with a gross operating revenue of \$423,116.47, only \$184,244.35 was saved as net operating revenue, showing an increase in this case of 10 per cent in operating expenses and a decrease of 12 per cent in net revenue.

While I realize that we are not justified in reaching any general conclusion from the two cases cited, yet it is apparent here, at least, that the privately-operated utilities compare most favorably with those operated by the holding company. I am entirely satisfied that, given the same general conditions, it will be found that the utility operated and conducted by its owners will compare most favorably with the utility operated through or by a holding company. Of course, it must be conceded that the purchaser in large quantities has an advantage over the small purchaser as to prices and selling conditions; yet, the larger the growth of these companies, the greater is the temptation of those who control them to interest themselves in the sources from which they obtain their supplies through stock ownership or some other method. This has become so prevalent in the railroad world that the government in its recent regulatory law has found it necessary to insert a section for the purpose of prohibiting such practice and it is not unreasonable to expect the same tendency to appear in the management of holding companies.

It is asserted that the operation of utilities by holding companies has resulted in reduced rates, and figures are given in support of this assertion. Yet an examination of the record shows that this reduction has been at the competitive point only and is by no means due to holding companies. What I mean by competitive point is that the reduction has come to the larger consumers of light and power with sufficient demand to justify the installation of a private plant and in order to get the business it has been found necessary to make a rate low enough to meet the cost of production by the private plant which has, in turn, brought a similar reduction to other large users of light and power.

A proportionate reduction has not been made to private consumers who are paying substantially the same rates they did before the holding companies entered the utility field.

That the holding company has a decided advantage in financial opportunities over the smaller operating companies is apparent. The holding company, on account of its superior banking facilities, its affiliation with large financial institutions having a world-wide market, should be able to market its securities on the most favorable terms, and at times when the small local plant must fail completely.

The holding company claims the further advantage that it does

not have to appeal to regulatory bodies for permission to issue its securities, but can issue and dispose of them without any outside interference. While this may be desirable from the standpoint of the promoters of holding companies, yet it cannot be in the interest either of the investing public who purchase the securities or of those who consume the product of its subsidiaries.

It is now almost universally conceded that the public interest requires the supervision of the issues of securities of all public service corporations. Yet the holding company whose only source of income is from the stocks and bonds of its subsidiaries, which are under the control of regulatory bodies, claims to have and does have the right to issue and sell its securities without such supervision.

It is argued, inasmuch as the subsidiaries are controlled by regulatory bodies, which fix the amount of stocks, bonds and other securities to be issued, the price at which they can be sold, and which also determine the way in which money received can be expended, that, therefore, it is impossible for the owners of the utility to operate them except for the good of the public and that the conduct of the holding company in the issue and sale of its securities can be of no concern to the public. With this contention I cannot agree. There are interests involved other than that of the operating company and that of the immediate community served. The exercise by the state of the power to regulate stock and bond issues of public utilities is not necessary in the interest of the consumer unless the outstanding securities are to have some influence on rates. The state exercises this power not for that reason alone, but for the far stronger reason, that because they are public service corporations, the state owes a duty to the public to see to it that the securities issued bear some relation to the value of the property charged with a public use. The credit and good faith of the entire country is involved. These securities are issued under the sanction of a charter issued by one of the sovereign states—*five and one-half billion* of them have already been sold—over *three hundred million* of them were sold abroad last year and *four hundred million* are being marketed each year. If the present ratio of growth continues, within twenty years, the amount of such securities will exceed the total amount of railway securities now outstanding.

Mr. Homer in his address on this subject last March stated that "the national banks of the country had 13.4 per cent of their

investment holdings in utility issues." Life insurance companies and savings institutions are turning more and more to these securities for their investments; and their policy holders and depositors and the general investing public are deeply interested in the safety and stability of holding company issues. The value of these securities rests wholly upon the earning power of the operating units which are under the control, in a large measure, of the regulatory body in charge.

The tendency to over-issue holding company securities is ever present. The profits of the promoters of these companies are fixed in a large measure by the amount they can issue and sell. Human nature is pretty much the same everywhere and it will be strange, indeed, if time does not demonstrate undue liberality in the issue of such securities.

This tendency is very clearly illustrated by two typical cases in my own state. The Merchants Heat and Light Company of Indianapolis, Indiana, was purchased in 1912 by the Merchants Public Utilities Company. At the time of the purchase there were outstanding \$3,049,000 of bonds and \$1,500,000 of common stock. This common stock was purchased by the Merchants Public Utilities Company at 60 per cent of its par value.

There was issued by the Merchants Public Utilities Company as a part of the transaction \$2,000,000 of common stock and \$1,100,000 of 6 per cent cumulative preferred stock. The common stock was in turn purchased by the American Public Utilities Company and what securities, if any, of the American Public Utilities Company were issued in payment of this does not appear from the record, but at any rate *one and one-half million* of common stock of the original operating company was represented by at least double that amount of new securities in the hands of the subsidiary holding company.

The Indianapolis, Columbus and Southern Traction line extending from Indianapolis to Columbus, Indiana, was built and operated for years by private capital charging the lowest rate in the state— $1\frac{1}{2}$ cents per mile. It had outstanding bonds of \$782,000 and common stock of \$910,000. Its owners caused its common stock to be increased to \$1,840,000 and executed to the Interstate Public Service Company, a subsidiary of the Middle West Utilities Company, a lease for 999 years at \$92,000 a year. In addition, the Interstate Company paid a flat sum of about \$600,000 for the execu-

tion of the lease for which it issued \$616,000 of the stock of the Interstate Company. What, if any, additional stock was issued by the Middle West Utilities Company on account of the transaction is not disclosed as the Middle West Company is beyond the jurisdiction of our state. There was, however, as a result of the entire transaction, over *one and one-half million dollars* added to the securities for which the particular utility is supposed to be responsible.

Since the transfer of the property an application has been filed with the Indiana Commission for an increase in rates. In neither one of these cases did a single dollar go into the treasury of the operating company, nor has the public received any benefit by way of reduced rates or improved service. I am somewhat familiar with the effect of holding company ownership and control in Indiana and the general rule has been largely to increase the volume of the securities of the various properties without any compensating benefit in the way of increased operating efficiency, reduced rates or improved service, except where small cities and towns have been connected with a central station, a practice rapidly increasing whether the utilities are controlled by a holding company or operated independently.

The price at which the securities of the holding company can be sold will be determined almost exclusively by the dividends paid upon the stocks of the subsidiaries, and, in order to find a market for its securities, the temptation will be ever present to strain every point to the declaration of the possible dividend upon the stocks of the subsidiaries in order to enhance the market value of its own securities. It cannot be said in answer to this that, by selling their securities, the dominant interests will lose control of the holding company. Experience has shown that a very small minority, concentrated in the hands of a few insiders, can control the conduct of any large corporation, if its stock ownership is widely distributed. The larger the corporation and the more widely the securities are scattered the more easily can this be accomplished. We may not unreasonably expect that at favorable times these secondary securities will be sold to the public and those who control the affairs of the holding company left with the minority interest.

Regulatory bodies up to this time have been slow to interfere with the rates of public utilities, but it is not unreasonable to expect they very soon will show a disposition to do so. This tendency will be more pronounced if experiments in municipal ownership, now

under way, such as the Cleveland lighting plant and the quasi-public ownership of the Citizens Gas Company of Indianapolis, under what is known as the Potts plan, should prove successful and demonstrate that gas and electric current can be furnished permanently at the unusually low rates there obtaining.

That the finding of commissions affect the market value of the securities is demonstrated by Mr. Homer when he stated "That as the result of rate hearings in New York, the stock of two electrical companies dropped 25 per cent to 30 per cent, the dividends of one company was cut $33\frac{1}{2}$; and of another entirely suspended, with a consequent hardship to the holders of those securities."

Should commissions, in the exercise of their power, attempt to reduce rates so as to impair the value of the securities of holding companies, then the public interest would become involved and the action of the commission would be influenced by the effect any decision they might render, would have on the value of the securities of the holding companies.

As these securities have been issued under the sanction of laws enacted by legislative bodies representing the people, commissions hesitate to adopt a rate that would largely impair and sometimes completely destroy their value.

The *Commercial and Financial Chronicle*, under date of October 24, 1914, urges the granting of the 5 per cent increase in freight rates and assigns as one of the reasons that from 15 per cent to 32 per cent of the assets of the savings banks and life insurance companies of the East and from 10 per cent to 20 per cent of the assets of our educational and benevolent institutions are invested in railway securities and that a failure to grant the increase would greatly injure these institutions.

It further urged the increase on the ground that vast sums of such securities are held abroad and a failure to grant the increase would impair the credit of the railways abroad and not only make it impossible to develop them so as to care for the expanding needs of the country, but that the credit of the whole country would be impaired by their failure to act favorably to the carrier.

The same influences will be at work on regulatory bodies should any widespread attempt be made to reduce public utility rates in our country and commissions, in adjusting rates, will be compelled to decide between the communities served by the utility, on the one

hand, and the investors in these securities, on the other. Those who are now protesting most vigorously that the securities issued by holding companies can have no possible influence on commissions will then be asserting that any action that would in any way impair the value of such securities is not only inherently wrong, but would injure the general credit and retard for years the proper development of our public utilities.

While this argument has no sound foundation from a legal point of view it will appeal to the sense of fairness and conscience of the regulatory bodies and exert a potent influence on their decisions.

Again, the complexity of control exercised by the holding company tends to obscure the truth and make more difficult the regulation of rates. The question as to the proper amount to be charged against the operating company of overhead, supervision, legal expenses, interest charges and rental of appliances owned or controlled by the holding company, often necessitates an inquiry into the business of the holding company which is frequently without the jurisdiction of regulatory bodies. The public service commission of Massachusetts in the Middlesex and Boston rate case decided October 28, 1914, says:

Control of a street railway company or holding company which loans large sums to the street railway company which controls a company selling power to the street railway company and also owns a park company to which large annual payments are made by the street railway company is obnoxious to sound principles of corporation management and confusing to a proper regulation by this Commission. Such control and interlocking management calls in question the validity and advantages to the street railway company of all contracts made with the holding company or in any way growing out of the common control.

It is interesting to note that the commission found in this decision that the holding company which also controlled a park and amusement company, caused the operating company to make such substantial payments each year to the maintenance of the amusement and park company as to enable it to pay an average of 25.89% annual dividends upon its capital stock, while the operating company itself was only earning 4.59%. The commission further found that the holding company was also charging its operating company $1\frac{1}{2}\%$ to 2% interest in excess of the rates paid by the holding company.

This situation is not peculiar to the Massachusetts case, but no doubt exists in many other instances, making the work of the regulatory bodies more difficult and confusing the issues involved in each case where the utility is being operated by a holding company.

It has been a common practice for holding companies to acquire a majority only of the stocks of the operating utility. This is a practice that should be absolutely prohibited. No corporation should ever be permitted to acquire a part of the property and then to use the whole of it in its own interest. A mere reference to the finding of the Massachusetts commission in the Middlesex and Boston case shows a few striking instances of how easy it is for a holding company to use a property for the benefit of itself and against the interests of the minority stockholders of the operating company.

We are told every day that business is being depressed and the proper development of our country retarded by the increasing tendency of state and national governments to interfere in the management of public service and other corporations.

Our public utility companies are not finished. They are in process; are constantly calling, and in increasing amounts, for new capital. They must be kept on good trading terms with the investing public, or the whole experiment of private ownership and public regulation will fail and the country be driven to public ownership, something to be avoided until such time, at least, as the administration of municipal affairs can be completely divorced from partisan politics. If regulation is to limit, as it should, the profits of shareholders, it should protect all investments honestly and prudently made or there will be no investment. If regulatory bodies, in the interest of the public, are to regulate and control all the securities issued by the utilities, then, in my opinion, that same public interest must in the end require the regulation and control of holding companies, whose sole business it is to operate these utilities, and issue and sell to the public, stocks and bonds based upon their securities.

BOOK DEPARTMENT

NOTES

KAISER, JOHN BOYNTON. *Law, Legislative and Municipal Reference Libraries*. Pp. xxi, 467. Price \$4. Boston: The Boston Book Company, 1914.

The general reader will not appreciate this book but to those whose work falls within its field it will be highly valuable. It is a manual and bibliographical guide to the materials and methods of three types of special libraries. The discussions of the problems involved in making the collections of the greatest use are clear and practical. The arrangement of subject matter in the book is excellent. The sample bibliographies are highly suggestive though the library worker will often wish that the limitations of space had not prevented their being made more exhaustive.

KEILER, H. *American Shipping*. Pp. xx, 144. Price, 6 M. Jena: Verlag von Gustav Fischer, 1913.

This volume by Dr. Keiler of the University of Kiel, Germany, contains a concisely written history of American shipping which, now that for the first time since the Civil War there are signs of future progress, is of timely historical and statistical importance. It divides American shipping in the foreign trade into the usual historical periods which have repeatedly been recognized by previous writers on American trade and shipping: (1) the colonial period, (2) the period of Confederation, (3) shipping under protection (4) shipping under reciprocity and (5) the period 1860-1912.

Most of the information is obtained from secondary works, particularly those by W. L. Marvin, E. R. Johnson, W. W. Bates, J. R. Smith, J. R. Spears and J. R. Soley. It, however, contains additional data collected from public documents and various American ship owners and dockyard managers, all of which are systematically arranged and clearly presented. In addition to the detailed history of American shipping engaged in the foreign trade it contains briefer accounts of the American coasting trade and the present shipping policy of the United States. Although issued in Germany, Dr. Keiler's book is published in English so as to make it more readily available to American readers.

MAROT, HELEN. *American Labor Unions*. Pp. ix, 275. Price, \$1.25. New York: Henry Holt and Company, 1914.

In the face of many discouragements, the author sets out, as she states, "to give the labor union viewpoint of labor union policies and methods which characterize the labor organizations of national reputation." Writing as a member of the American Federation of Labor, Miss Marot is in a position to state with some fairness the attitude of the American labor union.

The subject matter of the book is inclusive. The author begins with a discussion of labor unions and philanthropy, and devotes her final chapter to direct action. The eighteen intervening chapters are occupied first with discussions of specific organizations—the American Federation of Labor, the railroad brotherhoods, the Industrial Workers of the World, and the Women's Trade Union League. The following chapters are devoted to specific labor problems: The strike in its various phases, the union label, boycott, arbitration, limitation of output, and the like. The author also presents a chapter on scientific management, and one on labor in politics.

The book is written in a sympathetic rather than a critical spirit, and the reader has a vague feeling that, all things being considered, the book might have been made more authoritative in tone. Lacking a peculiar popular appeal, an effort should have been made to give a more scientific aspect to the work. A brief book on so large a subject may be scholarly or un-scholarly, but it must be cogent and forceful. The author has sacrificed scholarliness to brevity without gaining either cogency or force.

RUBINOW, I. M. *Was Marx Wrong?* Pp. 62. Price, 30 cents. New York: *The New York Call*, 444 Pearl St., 1914.

A searching pro-socialistic analysis of facts and figures which appeared in Simkhovitch's *Marxism vs. Socialism*. The similarity between Simkhovitch and Bernstein in plan and content is emphasized.

THOMPSON, SLASON, (Ed.) *The Railway Library, 1913*. Pp. 469. Price, 50 cents. Chicago: Bureau of Railway News and Statistics, 1914.

The fifth annual issue of the *Railway Library*, like the preceding issues, contains a compilation of articles on the subject of railway transportation and a concluding chapter presenting a mass of statistical information concerning American and foreign railways. The articles compiled this year consist in the main of notable addresses and papers prepared during 1913 by men who have come to represent the best thought of the country in the discussion of railway problems. The statistical chapter contains the most up-to-date information available in regard to railways, presented in the form of tables, interspersed with explanatory paragraphs. Mr. Thompson also devotes the text in a large measure to the presentation of arguments for an increase of freight rates on American railroads, and to criticisms of the present methods of railroad regulation.

REVIEWS

ASHLEY, WILLIAM J. *The Economic Organisation of England*. Pp. viii, 213. Price, 90 cents. New York: Longmans, Green and Company, 1914.

A series of eight lectures delivered in the Colonial Institute of Hamburg in 1912 makes up the contents of this volume. In these lectures Professor Ashley gives a concise and interesting history of the economic organization of England since the thirteenth century; showing the development of the agrarian system from the manor to the modern farm; describing the rise of foreign

trade; depicting the growth of manufacturing through the various stages of family system, guild system, domestic system and factory system; emphasizing throughout the gradual evolution of the modern capitalistic organization of industry, and tracing the changes which took place in the relation of labor to the other factors of production.

Although presenting a large subject within a very brief compass, Professor Ashley has accomplished his purpose with signal success. Each important feature of the economic history of England is treated in a clear and interesting manner, and a student desiring to secure a general notion of the entire field could find no work better suited to his needs than this one. Furthermore Professor Ashley has achieved in a most admirable manner the lecturer's ideal; he gives a comprehensive picture of the important and striking features of his subject and at the same time he instils in his audience a desire for further investigation and study by continuously calling attention to correlated topics of a subordinate nature, the details of which his lack of time does not permit him to consider. He keeps, as it were, to the main road of travel, but he points out innumerable alluring branch roads and by-ways which one feels irresistibly impelled some day to return to and explore.

An appendix gives a short list of the best books dealing with the various subjects treated in each of the lectures.

T. W. VAN METRE.

University of Pennsylvania.

BEARD, CHAS. A. and MARY RITTER. *American Citizenship*. Pp. xiii, 330. Price, \$1. New York: The Macmillan Company, 1914.

The authors have designed a civics book intended primarily for use in high schools. They make two notable departures from the generally accepted civics books. On the one hand, they insist that since "the vast majority of pupils in the high schools are girls," a civics book concerning itself with the problems of the entire community, should be so constructed that it deals with the civic problems of women as well as with the civic problems of men, and this entirely irrespective of the relation of women to the franchise. The second departure which the authors make involves an approach to the civics problem through the federal, rather than through the local, government. "The chief point usually made in favor of approaching through local government is that it is more concrete and simpler. We have come to the conclusion, on carefully weighing the matter, that this argument is largely illusory; that the concreteness and simplicity are more imaginary than real. The federal post office is as concrete as the town hall and the ways of Congress are not more mysterious than the devious methods of the town caucus which constitutes the 'invisible' local government." This argument carries with it a large measure of appeal.

The book is carefully divided into three parts—one dealing with human needs of the government, a second with the machinery of government—officers, elections and parties, and a third with the work of government. In places the book sounds somewhat too technical for high school purposes. Generally, however, it is well-written and admirably put together. This book, which

is in reality a combination of what is generally called civics and sociology, emphasizes the necessity for the definition of civics and sociology in a high school course. Certainly the high school civics of the future will depart from the technical discussions of government machinery. The extent of this departure must remain a matter of speculation.

SCOTT NEARING.

University of Pennsylvania.

CROW, CARL. *America and the Philippines*. Pp. xi, 287, Price, \$2. New York: Doubleday, Page and Company, 1914.

The American newspaper man does much to popularize the work of more serious writers. Carl Crow does a service of this sort. The volume is not the product of "thorough study" as its advertisement avers but it puts in sketchy, readable form a summary of the conditions under which our government works in the islands and the results it has achieved. The first chapters describing the people and their history contain not a few slips and overstatements, but the latter portion of the book describing present day conditions is a substantially accurate account relying in great part upon official documents and is written in a style which will carry a large body of information to the reader without excessive brain work.

The chief conclusions at which the author arrives justify the policies followed by the government. He outlines the improvement in sanitation, communication and education. He concludes that the Filipino still has in fact only a remote influence upon actual government and that this condition must be maintained at least until the old class educated in the Spanish régime becomes the minority. Otherwise caciquism would reappear in its old vigor and all that has been accomplished would be lost. The successes of American occupation do not, however, blind the author to its mistakes. He evidently believes the tariff policy which we have pursued in regard to the islands to have been unfortunate. The expenditures in road-building might have been much less had proper consideration been given to local conditions of rainfall. Financial disturbances could have been forestalled by prompt action by the government and more skillful handling of the relations between Filipino and American might have brought a basis for mutual respect instead of distrust.

This is not an exhaustive treatise but its popular way of presenting the problems of our greatest island colony will help to make the American public realize the importance of a task to which they are now prone to give little attention.

CHESTER LLOYD JONES.

University of Wisconsin.

LE ROY, JAMES A. *The American in the Philippines*. Pp. xxviii, 774. Price, \$10. Boston: Houghton, Mifflin Company, 1914.

The works of Blount and Worcester have given us from different points of view what our government has accomplished in its most important colonial

experiment. Their works deal chiefly with what the government did after the period when American control was decided upon and established. Mr. Le Roy had intended his work to present a detailed review of conditions from the outbreak of the native revolt against Spain to the end of the first five years of American occupation. During the latter portion of this period he was employed as secretary to the second Philippine commission and had access to facilities at the hands of but few students. Only the period up to the beginning of his residence is covered in these carefully written volumes. They are, therefore, an excellent supplement to the first works mentioned.

In the official position he held, Mr. Le Roy had continually brought to his attention questions relating to the policy of the government in retaining the islands and later questions dealing with the degree to which self-government should be extended to the inhabitants. Under these influences he became a staunch opponent of the proposals of the "anti-imperialists." The partisan character which this question came to have has not, with a few exceptions, however, warped his judgment in the treatment of conditions existing in the period of which he writes.

Throughout these volumes there is evidenced a full appreciation of what Spanish colonization has done for the islands. The author finds their condition markedly improved by the economic and social changes introduced and the comparative peace which the civilization brought. On the other hand, he portrays also the shortcomings of the old colonial régime, its undue emphasis on religious control of the natives, the resulting friction between civil and religious authorities, the mistaken tax and educational policies and the general failure to adopt the measures made necessary by changed economic conditions.

The first volume gives a review of Philippine affairs in detail from the outbreak of the revolt against Spain to the transfer of authority to the United States by the treaty of Paris. Philippine unrest is shown to have been unorganized but formidable, the Spanish policy in dealing with it, pusillanimous and halting. Rizal, the posthumous national hero of the Filipinos, is made to play a more important part as a prophet and leader than many historians will accord him, though his personal shortcomings are by no means discounted. The American occupation is pictured as involving no real military difficulties. The relations between the American government and Aguinaldo are discussed in detail, the author's conclusions being in general in support of the contention that the Americans were straightforward in their dealings with "the little brown men." The discussion of the treaty of Paris is interestingly done especially in the portion which deals with the personal views of the negotiators as to what should be done with the islands. The second volume is a detailed history of the Philippine insurrection and is of less interest to the general reader. This is one of the best discussions which have appeared of the conditions confronting our government in the first years of its control of the archipelago.

CHESTER LLOYD JONES.

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MITCHELL, SYDNEY K. *Studies in Taxation under John and Henry III.* Pp. xiii, 407. Price, \$2. New York: Yale University Press, 1914.

Few aspects of constitutional development in the mediaeval period of English history are more important than taxation; none has been more sadly neglected by historians. This book represents the first attempt to make a systematic and comprehensive survey of the subject even within a limited period. For, although the author modestly designates his work "Studies," his object is "to give as complete an account as possible of each tax levied during the reigns of John and Henry III, presenting all the material in print and as much from the unprinted rolls as could be gathered within a limited time" (p. vii). This goal has not been quite reached, since all published material has not been utilized. Nevertheless the author has extended his research over a wide range, and the product is of solid worth. He has performed a substantial service for students of the English constitution.

Although both royal and papal taxes imposed during the period are considered, the former occupy by far the more prominent place. Of the royal revenues only those classed as extraordinary are treated, namely, aids, scutage, tallage, *dona*, carrucage, and taxes assessed on personal property. Each levy of each of these taxes is dealt with in chronological order. The chief points discussed are "the occasion and the circumstances under which it was levied, the incidence, the assessment and collection, and the amount yielded" (p. 9). This method has rather mechanical results and produces some repetition, but we are assured that "in no other way can the facts of the taxation of the period be presented" (p. 9). It has the decided advantage of rendering the material conveniently accessible for reference. In a final chapter, which is entitled "Summary," though it occupies a quarter of the book, the author presents his conclusions concerning the nature and significance of each royal tax and concerning the relation of the great council to taxation.

On all these aspects of the subject Professor Mitchell has brought to light a large number of new facts. He has also corrected many erroneous statements made by previous writers, though he rarely indicates such corrections. On the whole it is our detailed knowledge of these taxes which is revised rather than our broad conclusions as to their significance. Professor Mitchell's results do not for the most part controvert the generally accepted views with regard to the influence of taxation on the constitutional development of the thirteenth century. Yet their importance should not be underestimated. In many significant particulars they modify or broaden the accepted views. This is notably true with regard to scutage, which is treated at greater length and more thoroughly than any of the other taxes considered; but on no phase of the subject is there failure to increase our store of information.

While Professor Mitchell's contribution is of large proportions, it should be kept in mind that his work is of the pioneer type. Much still remains to be done, as he would doubtless be the first to acknowledge. In fact he informs us himself that the manuscript sources have not been fully utilized. He appears to have confined his attention to the manuscripts in the public

record office, where he seems to have investigated pretty thoroughly the fiscal accounts of John's reign and a part of the enrollments made by Henry's chancery and exchequer. But he does not make use of all the material relating to the subject in the public record office and there is much outside that depository which he has not used. How much new light these records might cast on the taxation of laymen the reviewer cannot say, although they certainly contain some valuable evidence. Concerning clerical taxation a large amount of information is still buried in them. Professor Mitchell, for example, does not state the yield of the triennial tenth of clerical income granted to the king in 1265. The sums produced in several dioceses are entered, however, in the *Patent Roll* for 53 Henry III. This roll is now calendared, but was doubtless published too late to be of service to Professor Mitchell. Copies of several of these entries, however, are printed in Prynne's *Exact Chronological Vindication* (III, pp. 1050-1054)—a work which supplements the present at various other points. Additional details about the administration of this tenth may be found in the *Exchequer K. R. Accounts* and the *Clerical Subsidies* at the public record office, in two cartularies at the British Museum and in documents among the muniments of the Dean and Chapter of Canterbury and the Dean and Chapter of Westminster. The situation is similar with regard to several of the taxes levied on the clergy.

The work is further rendered defective by a number of loose or inaccurate statements. These are apparently due in part to the occasional uncritical acceptance of a chronicler's narrative. At page 267, for example, the author says "in the same year [1246], the pope made another demand for money, from certain clergy half of their revenues, from others a third, and from others a twentieth, all for three years." He gives no explanation of the nature of the tax beyond this vague one based on the prejudiced and inaccurate accounts of Matthew of Paris and the Burton annalist (note 55). As a matter of fact, there were two taxes, one for the benefit of the Holy Land, one for the benefit of the tottering Latin Empire of Constantinople. Both were decreed by the council held at Lyons in 1245. If he had glanced at the official acts of this council (*e.g.*, Hardouin, VII, pp. 390-395), he might have given a more nearly complete and correct description of these taxes. He certainly would have avoided the erroneous remark about their apportionment made in note 54. Some of the questionable statements are due, on the other hand, to loose diction or to careless reading of the sources. He says, in speaking of a fortieth levied by the king in 1232: "The levy was paid by . . . all churchmen except the beneficed clergy who were specially exempted in the writ" (pp. 201-202). The writ mentioned reads "*Sciatis quod archiepiscopi, episcopi, abbates, priores, et clerici terras habentes quae ad ecclesias suas non pertinent . . . concesserunt*" (Stubbs, *Select Charters*, 8th edition, p. 360). The exemption is granted on land held by frank almain; beneficed clergy holding lay fees had to pay the tax on them. Professor Mitchell himself subsequently mentions several bishops who paid the tax (p. 204). Again, he says of a tenth imposed on the English clergy by the pope in 1229: "the pope sought to levy it on the actual value of the property and revenues." (p. 177). In a note he quotes the words of several chroniclers as his author-

ity. These quotations, however, are so conflicting that it is impossible to decide from them whether the tax demanded was a tenth part of the estimated value of property, or a tenth part of the estimated income from property, or both (as Professor Mitchell implies). The confusion could easily be removed by reference to the papal letters on the subject, where it is called "*decimam omnium reddituum et proventuum*" (*The Register of S. Osmund*, edited by Jones, Rolls Series, II, pp. 147, 148).

These are not isolated examples of incompleteness and inaccuracy. They are cited, however, not so much for the purpose of impugning the general accuracy of the work, as for the purpose of emphasizing its tentative character. There is no doubt of the soundness of the major portion of Professor Mitchell's work, and his historical honesty is exemplary. His pages are crowded with references to authorities, which enable the reader easily to assure himself about the correctness or fulness of any statement. The book should receive a hearty welcome as a much needed and distinctly important addition to our literature.

W. E. LUNT.

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SEEBOHM, F. *Customary Acres and Their Historical Importance*. Pp. xiii, 274. Price, \$4. New York: Longmans, Green and Company, 1914.

These unfinished papers were begun by the late Mr. Seebohm in hope that they might furnish the European background of his well known studies. The work was planned on too vast a scale and remained incomplete at his death. Enough had been accomplished, however, to exhibit the possibilities of the project and to justify publication. "If it can be shown that the British customary acres . . . form a normal group coinciding with a corresponding normal group on the other side of the channel similar in area and in the form of 1 x 10, like those in England, these customary acres will take a place of new interest in economic inquiry. It may be possible to follow them back to the central home from which the Celtic tribes or possibly earlier immigrants wandered into the western extremities of Europe bringing with them as part of their racial possession whatever of civilization they had already attained to, whether derived from a still earlier home, or gathered since their settlement in Central Europe, from the agricultural methods of the great corn growing regions of the nearer or farther East" (p. 7).

The search for this central home carries Mr. Seebohm to the delta of the Danube and to the valley of the Po. The relations of land measures and lineal measures of distance are indeed suggestive of social contact, though many will no doubt be somewhat skeptical of the precise nature of this contact. The inquiry is then pushed further afield by studies of the Mediterranean basin. The influence of the Graeco-Roman world upon measures of land and of distance seems to have been considerable, more considerable than most students of open field husbandry have been inclined to suppose. It would be strange, but not passing belief, if such a study of measures and plough lands should ultimately furnish a connecting link between the open

fields of the middle ages and the agriculture of classical antiquity. The "shell" of the open field village, which Mr. Seebohm has already made the basis of much significant speculation, thus seems to receive new and mysterious meaning in these posthumous pages.

ABBOTT PAYSON USHER.

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VINOGRADOFF, PAUL (Ed. by). *Oxford Studies in Social and Legal History* Vol. IV. Pp. vii, 403. Price, 12/6. Oxford: Clarendon Press, 1914.

This volume contains two monographs: *The History of Contract in Early English Equity*, by W. T. Barbour; *The Abbey of St. Bertin and its Neighborhood, 900-1350*, by G. W. Coopland. Both studies exhibit to a marked degree the intensive utilization of special sources that characterizes the series, but this volume is not as interesting to the general student as its predecessors. The subjects are in themselves of special appeal and the results are not sufficiently coördinated with the general problems to which they are related.

Professor Barbour's study of contract in equity utilizes new material much of which is unpublished—the petitions presented to the chancellor. Accounts of the development of chancery jurisdiction have hitherto been founded primarily upon the text writers. Some petitions have been published but so small a portion of the total mass available that no conclusions could be drawn. Between the accession of Richard II and the early years of Henry VIII there are preserved 377 bundles of petitions covering approximately 300,000 cases. These have been examined by the author with particular care during the early period, and by an adequately selective process for the later period. The material is defective with reference to a general study of chancery jurisdiction because barely one-tenth of the petitions are endorsed with the judgment. The evidence here available thus adds little to our knowledge of the legal doctrines underlying decisions or of the sources from which the chancellors derived the essential principles of their jurisprudence. The petitions throw considerable light, however, upon the chronology of equity jurisdiction, and it appears that the chancellor had built up a considerable series of precedents in contract before the common law began to compete with its rival remedy afforded by the action of *assumpsit*.

The interest of the monograph is thus much narrower than its title would suggest. No attempt is made to trace the doctrines to their source. Professor Barbour is inclined to regard the canon law as the most significant influence, but it would seem that the law merchant must have furnished some notions. There is reference to the substantially appellate jurisdiction of the chancellor in cases involving the law merchant, but the relation of equity to the law merchant is not treated systematically. Probably the petitions throw little light upon the subject, and the author confined himself largely to the evidence of the petitions. The common law doctrines are concisely stated in excellent introductory chapters.

Mr. Coopland's study of the manuscript and printed materials concerning the Abbey of St. Bertin in Artois contains excellent chapters on status,

modes of tenure, and systems of culture. The earlier chapters contain little that is significantly new or of general interest. The discussion of the legal rights and economic well-being of the peasants is stimulating. Mr. Coopland emphasizes the need of distinguishing between improvement in legal status and increase in material well-being. By 1300 there was little serfdom in Artois, but the material condition of the peasants left much to be desired. The rise out of serfdom in this district, the so-called Gulf of St. Omer, was closely associated with the effort to reclaim waste or to restore to cultivation land that had relapsed to the wild state during the period of Norman incursions. It is interesting to observe also the excessive subdivision of the holdings. The process of division had been carried as far in the fourteenth century as in the nineteenth, and Mr. Coopland concludes that "the curve of morcellement' has changed position and direction more than once in the course of the Middle Ages and Modern times."

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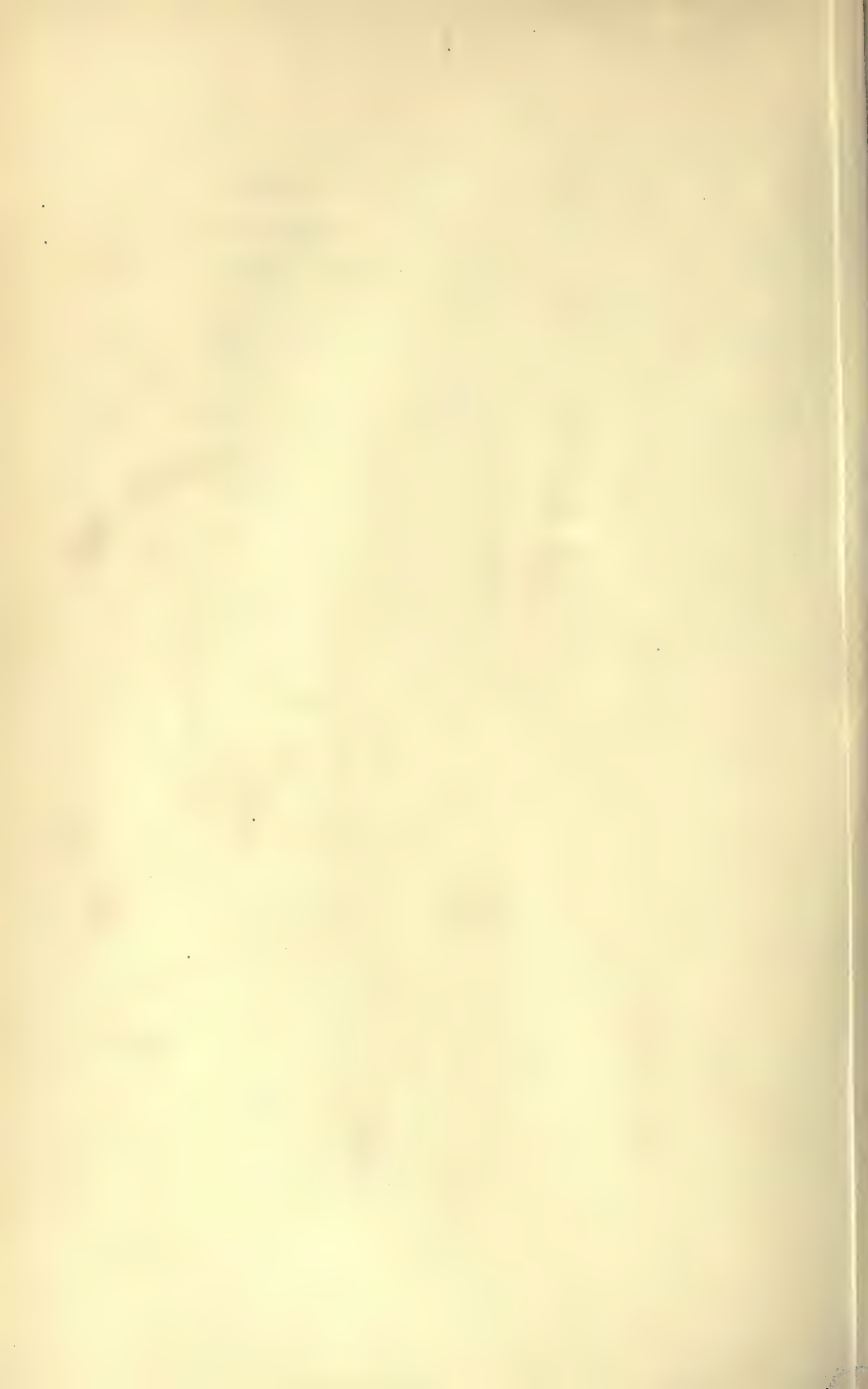
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READJUSTMENTS IN TAXATION

The Annals

VOLUME LVIII

MARCH, 1915

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pp 3-7
B 1-275
112 plates

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
36TH AND WOODLAND AVENUE
PHILADELPHIA
1915

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SPAIN: E. Dossat, 9 Plaza de Santa Ana, Madrid.

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NEWER TENDENCIES IN AMERICAN TAXATION¹

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If we regard our fiscal development in the light of what is taking place abroad at present and what has occurred in the past, we have to signalize several marked tendencies now visible in the United States.

The first point is the relation between personal taxes and real or specific taxes, or, as our legal brethren say, between taxes *in personam* and taxes *in rem*. All taxes are ultimately paid by some person, but the tax may be in the first instance imposed upon a specific thing, irrespective of the person. A tax upon a man's entire income or entire property, intangible as well as tangible, is a personal tax. A tax upon a particular piece of property or upon a particular business which affords a revenue is a real tax or a specific tax or a tax on the thing apart from the person. It is significant that taxation has generally begun as a specific or real tax and that it developed into a personal tax. In New England, for instance, the earliest taxes were on particular things, like sheep and cows and houses and stock in trade; and only at a much later period do we find the general property tax, where the tax is imposed upon the individual with respect to his entire property, whether that property consists in things or in simple relations. For one reason or another, however, which it is not necessary to emphasize here, this personal tax everywhere turned out to be a failure; and step by step during the nineteenth century in Europe and more recently in some of our advanced American commonwealths the personal tax is again giving way to the real tax, the tax on things, the specific tax. So in France, it will be remembered, when the personal taxes were abolished in the revolution they were replaced during the whole of the nineteenth century by the specific taxes, a tax on land, a tax

¹ This introduction is adapted with a few slight changes from the presidential address of Prof. Seligman at the conference of the International Tax Association at Denver, September, 1914. Although it appears in the annual volume of the Proceedings of that Association, it is reprinted here because it is in itself so valuable and because it makes such a pertinent and suggestive introduction to the other papers in this volume.—The Editor.

on houses, a tax on business, a tax on doors and windows, a tax on movable capital. In the same way in the state of New York, the real estate tax has become a tax on property, irrespective of who owns it; the tax on mortgages is similarly a specific tax; the tax on secured debts is of the same nature; the bank tax is a tax on banks, not on the shareholders, etc. In Pennsylvania and other states, the business taxes under various names are taxes on things and not on persons. The excise tax in many of our states is a tax on things and not on persons. And even the inheritance tax is in part at least a tax on the thing, the estate, rather than, as in a few cases, a tax on the recipient of the individual share of the estate.

On the other hand, side by side with this undoubted tendency to replace personal taxes by real taxes or specific taxes, we find the tendency ever springing up anew to reintroduce in perhaps another way the system of personal responsibility through personal taxes. Take, for instance, the development of the income tax movement in this country; take the recent passage only a few weeks ago of the supplementary income tax in France; take the similar movement in every other part of the world. There is thus a double movement, a movement from personal to real or specific taxes, which is best illustrated in the process that is now going on in our state and local taxation, and a counter movement from real to personal taxation, which is also obvious in this country. The lesson to be drawn from these double tendencies we shall emphasize a little later on.

The second tendency is the development from local to general taxation. All taxes were originally local and only slowly did they become general or state taxes. Often when this happened, the state taxes were tacked on to the local taxes, as is still the case in most of the American commonwealths. It is only very gradually that we find a transition from local administration to general or state administration. We are in the midst of this development at the present time in the United States, a first stage in many of our commonwealths being the central control over the local administration, and only a few of our states having reached the point, which all will reach sooner or later, of a central administration, as in the case of the excise tax or the inheritance taxes in New York, of the income tax in Wisconsin and of the corporation taxes in several states.

Side by side with this development, however, or rather somewhat

subsequent to this transition from local to general taxation, comes the reverse movement from the general to the local tax. By this I mean the transition, not so much in the administration, as in the proceeds of the tax. Thus, as we all know, the specific taxes or real taxes in Germany, like the land tax, the business tax, etc., were relegated at the close of the nineteenth century to the local divisions, while the new personal tax, like the income tax, was kept for state purposes. The same is more or less true in England. And when we come to analyze it we find that this is the real meaning of the movement now in progress in this country, of the separation of state and local revenue, or of the segregation of source, a movement based on the idea that certain taxes are more properly general or state in character while others are more properly local in character, even though the administration of these local taxes may be profitably subjected to a central control. Just as no one can understand our present American development without grasping the distinction between taxes on things or real or specific taxes and taxes on persons, so no one can comprehend the real significance of tax reform in the United States today without bearing in mind this turn from general to local taxation and back again to the separation of state and local revenue.

The third tendency is the movement from property as the basis of taxation to the produce or yield of the property or to the income derived from the property. The reason why a general property tax has broken down all over the United States is not only because it was a tax on the person without the adequate machinery to assess the person, not only because it was an attempt to tax locally what is no longer local in character, but also because under modern conditions property as a whole is not so satisfactory an indication of tax-paying ability as the yield of the property or the income from the property. We see the truth of this statement in our corporation taxes, where the tendency is strong to tax receipts, that is, yield, rather than property. We see it in the agitation over our forest taxes and our mining taxes, where the tax on yield or produce is gradually supplanting the tax on property. We see it in the feeling on the part of our business men that the property invested in the business is not so satisfactory an index of fiscal obligation as the yield or the income. And that, of course, is the main reason why the twentieth century has become the century of income taxes rather

than of property taxes. It is this fact more than anything else which explains the gradual break-up of our general property tax.

On the other hand, we find a reverse tendency, precisely as in the preceding cases. In the case of the tax on land, especially for local purposes, property is a better index of fiscal obligation than the yield or the rent of the land, simply for the reason of speculation in urban land. The speculative property value of a piece of land may be far greater than the capitalized amount of the actual rent or rental value. Just as we are only beginning to catch up with Europe in a recognition of the fact that yield or income is a better test than property in general, so Europe is only beginning to catch up with us in recognizing the fact that for local land taxes property or selling value is a better test than rent or rental value. A large part of the explanation of what is going on in England and on the continent today in local taxation is explained by this desire to change from rental-value taxation to property-value taxation. A great part of the explanation of what is going on in this country today is a recognition of the transition from property or selling value to yield or income in taxes in general.

The fourth tendency is the transition from the older theory of benefits in taxation to the newer theory of faculty or ability. This is somewhat in line with the transition from the real taxes to the personal tax. The tax was imposed upon things because the particular thing was supposed to derive some benefit from governmental activity. The tax is nowadays imposed upon the person because the person is recognized as owing an obligation to support the state just as he is held to support his family. Yet here again there is a reverse movement, in part at least. We hear a great deal in modern times of privilege and the demand that privilege should be the real test of taxation. If by privilege is meant the benefit accruing to the thing or the individual, it is an illegitimate reversal to the primitive doctrine. If, however, the privilege be regarded as increasing the yield of the property or the income of the individual, the privilege may be rightly considered as enhancing the faculty or the ability of the individual to pay; and it is proper, therefore, that the ability derived from special privileges should be subject to special taxes.

Finally we notice the tendency in taxation away from individual to social considerations. This is responsible for the idea of progression or graduation in our income taxes; it is responsible for

the differentiation or distinction between earned and unearned incomes, as we find it abroad and shall probably soon find it here. It is responsible for the exemptions granted for general social reasons. By this we do not refer so much to the exemptions in the income tax as, for instance, to the exemption of mortgages from taxation in our property tax, or the exemption of money and credits. Again, to this cause we must refer the modern movement for a higher tax on land, especially in local finance. I am, indeed, not a single-taxer—far from it—for the single-tax philosophy makes two fundamental mistakes. It neglects the distinction, referred to above, between real or specific taxes and personal taxes. When the single-taxer says that land alone should be taxed, he is thinking only of things. But as I was careful to point out above, this distinction does not apply at all to the entire class of taxes on persons. The income of an individual may be derived not from things or property but from relations, from salaries, from good will, from copyrights, from all sorts of intangible and invisible circumstances. The distinction between land and other things does not affect in the least the obligation of the person to contribute to the support of government for income derived not from things. In the second place, the single-taxers either revert to the long outworn idea of benefits, or inordinately exaggerate the element of privilege in the conception of faculty. They erect into a whole what is only a small part.

While, therefore, I must consider the single-tax philosophy as essentially incomplete, it is none the less true that a higher taxation of land or rather, if you will—in order to differentiate my idea from that of exempting improvements in the local real estate tax, in which I do not believe—it is none the less true that an additional tax on land may be entirely legitimate from the social, rather than from the individual, point of view. And, finally, as I have often pointed out, certain indirect taxes which cannot be upheld at all from the point of view either of benefits or of faculty in taxation become perfectly explicable when we regard them from the social, rather than the individual, point of view, *i.e.*, from the point of view of their consequences on the body economic rather than from that of the relation of one individual to another.

What lessons, then, applicable to practicable tax reform in the United States are to be drawn from these world-wide tendencies in

fiscal theory and fiscal practice? To the attentive student these practical lessons are obvious.

First and foremost, I should put the administrative lesson involving the transition from local to general control. This is one of the most difficult lessons for Americans to learn, because of the inveterate habits of local self-government and the old slogan of home rule. That there is a certain justification for the home rule movement in general politics I do not wish to deny; but no one who has attentively studied the progress of good government the world over can ignore the fact that a certain degree of centralization is essential to progress. I agree with careful students of the problem, like Sidney Webb in England, that what they call the local administrative anarchy of the United States is just as bad as the other extreme of the centralized autocracy of some of the European countries, and that the real solution of the problem is not centralization but central control of local action. England, the classic home of local self-government, has made during the past few decades longer steps in central control than perhaps any other country. Without tracing the movement toward centralized state or federal control, which has become so marked in this country in the past few years, in our financial system, our school system, our sanitary system, our police system, etc., it is obvious that in fiscal matters those states now stand at the head which have developed an efficient central control over local action. The sooner all of our American states fall into line with the more advanced commonwealths and develop a centralized control over local revenues and local accounts, the greater the progress toward efficiency and justice. This, I should say, is the first great lesson for all of our local statesmen to learn.

But we have a still more important and a more difficult lesson to learn, the lesson, namely, that just as local finance must in some respects be subject to state control, so state finance must gradually be subject in some respects to central control. There is, indeed, such a control now, for no state can through its fiscal laws interfere with interstate commerce. But what I mean goes further than that. Just as our new federal reserve board is effectively to control the operation of banks within the states, just as our new trade commission is designed to control business carried on under certain conditions in the states, just as the demand for a national child labor law and for similar industrial legislation is becoming louder

and louder, so the time is fast approaching when it will be impossible as well as unwise to escape federal control of certain taxes, essentially interstate in character. In modern times corporate activity has transcended state bounds; incomes are derived from nation-wide sources; and the interstate complications connected with inheritances are becoming well nigh unbearable. It will be well for all our state officials to consider carefully how best to adjust the state taxation of corporations, inheritances, and incomes to these newer conditions. It may even be the solution that we shall gradually permit the federal government to administer these taxes and to apportion the proceeds in whole or in part among the various states according to carefully defined rules. The movement from local to state control and from state to federal control in certain points of our fiscal practice is one that we must all be ready to face and carefully to study.

The second lesson that I should like to emphasize is the tendency toward the separation of state and local revenue through the principle of segregation of source. Practically, of course, this means that the real estate tax should be reserved primarily for local purposes and that the state should be alimeted by proceeds of state-wide activities or phenomena, such as corporations, inheritances, and the like. That the separation of local and state revenues is a panacea for all ills no one would affirm. Nor must we forget that there are in this movement difficult problems to be solved, as we have already seen in the case of California, New York, Connecticut, etc. But the chief problems, namely, the question of providing local revenues on the one hand, and of insuring an elasticity in the state revenues on the other, are by no means insoluble, and the immense advantages that would accrue from a reasonable separation need not be adverted to here. One word only of caution. Do not confuse the segregation of the sources of local revenue with local option. While a certain degree of freedom ought within bounds indeed to be granted to the localities, it is essential, as I have intimated above, not to sacrifice the general scheme of central control to the risk of what has been called local anarchy. Just as the federal government does not permit any state fiscal interference with interstate commerce, so the state cannot permit any local disruption of the conditions that make for state-wide economic prosperity. The movement toward extreme local option, in fiscal policies at least, is like the movement to an

exaggerated individualism in party politics. The twentieth century is happily getting away from the crass *laissez-faire* and natural-rights individualism of the French Revolution. Let us beware of reintroducing into finance what we are fortunately leaving behind us in all the other domains of politics. Let us not confuse the separation of state and local revenue with the exaggerated demands of local option.

The third lesson that we have to learn is our readiness to free ourselves from our attachment to the property tax. Everywhere else in the world the general property tax has disappeared as the chief source of public revenue, and everywhere else for many decades, as I have pointed out, property is being replaced by yield or income as the base of taxation. What we are slowly doing in our corporation tax, what we are beginning to do in our forest tax and mining tax, we must get ready to do in the other parts of our general property tax. It will be a hard struggle in many of our states to bring about the constitutional changes to permit of classification of property for purposes of taxation; and yet this movement toward a classified property tax is but another way of emphasizing the point that I desire to make. For one of the reasons at least for classification, that is, levying a different rate on different classes of property, is that there is no longer any homogeneity in the yield in different kinds of property. Anything that tends to break down the reliance upon the old general property tax will be so much gained, and the sooner we get toward substituting the conception of yield or income for that of property, the closer we shall get to the practical interests of modern life. In one point alone the gain will be marked. The entire problem of franchise taxes, that is, of the tax on the franchises of corporations, will disappear for a franchise is taxable only as a piece of property, and if we replace corporate property by corporate receipts or corporate income as a test—as they have done everywhere else in the civilized world—a great number of our difficulties will vanish in thin air.

In only one point, as I have stated, must we continue to hold fast to the property idea, and that is in the matter of local taxation of real estate. But as there is no movement at the present time in this country away from the local property tax, I need not spend any time in discussing a danger that does not exist.

The fourth lesson to be drawn from present-day tendencies is connected with the distinction that I made at the outset between per-

sonal taxation and real or specific taxation. We are all agreed that the general property tax must go or, rather, that no attempt must be made to prevent its rapid disappearance. Now there are two ways of hastening its disappearance. The one method is to pursue the policy, historical, followed by other nations, namely, to convert the personal tax into a real tax, to change the general property tax on the individual into a series of taxes on the things irrespective of the individual. In this movement New York has taken the lead. As is familiar to all of you, the real estate tax has become a tax on the land and house, irrespective of the individual; the mortgage tax has become a tax on the mortgage; the secured-debt tax has become a tax on the debt; the tax on bank shares has become a tax on the bank, and so on. The immense advantage of such a movement carried to its ultimate outcome is that the administrative difficulties are reduced to a minimum and that the glaring inequalities and absurdities connected with the general property tax completely disappear. The danger, however, in the New York movement is that these steps may be considered a final solution of the problem rather than as a preparation for the ultimate solution. For, as I pointed out at the beginning, the tendency from personal to specific taxation is always ultimately replaced by a counter tendency from specific to personal taxation. In the long run you cannot silence the conviction of the average man that taxes ought to be borne by individuals in accordance with their wealth—even though you do not necessarily measure this wealth in terms of selling value of property. Accordingly, we find in one of our states, namely, Wisconsin, the second tendency referred to, *i.e.*, the effort to substitute for an unworkable a more workable personal tax, that is, in Wisconsin the old general property tax is being replaced by a new income tax. In France, you will remember, it took over a century to accomplish this result. The old general property taxes before the revolution were replaced by taxes on things, and it is only a few weeks ago that these taxes on things have been replaced by a personal income tax. The Wisconsin plan is interesting; but as I have stated in another connection, it cannot, in my opinion, solve the problem. Although income is a better test of ability to pay than property, and although the centralized administration of the income tax is an immense improvement on the local anarchy of the old personal property tax, even a state income tax cannot thoroughly succeed because of complications of interstate

taxation and the difficulty of getting at the income derived from interstate sources. Moreover, as our federal income tax develops, the confusion between the state income tax and the federal income tax levied according to entirely different principles is bound to become greater.

Thus, neither the New York system nor the Wisconsin system is in itself a solution. Each is better than the system in most of the other states; but neither is thoroughly satisfactory. The conclusion is obvious. In the one case, as in the other, an effort must be made to utilize the federal administration. Let each state add to the 1 per cent of the income tax or the corporation tax, which is a part of the income tax, as many more per cent, within reasonable bounds, as it needs for its own state purposes, and let some arrangement be made with the federal government for utilizing the federal returns. In the meantime, and as preparation for this eventuality, let those states with a less successfully organized central administration than is found in Wisconsin follow the plan of replacing their personal tax by a system of real taxes, either through a classified property tax, as is beginning in a few states, or through the system as it is being developed in New York. But do not let us delude ourselves into the belief that it will be possible or desirable by any kind of manipulation to retain indefinitely the anachronistic general property tax as it is still found in most of our states. Let us recognize the fact that New York, equally with Wisconsin, represents a step forward in the onward march of tax reform.

The final lesson to be drawn from our survey is the necessity of group or associated action among the states. In a federal form of government like that of the United States this is an imperative necessity no matter what form of taxation be adopted. It is obvious that if we have no federal control or no central fiscal legislation as is found in some of the European federal states, the complexities of double taxation will increase with the effectiveness of the tax. It is only because some of our state inheritance taxes are more successfully administered than the personal property tax that the difficulties are especially felt in the inheritance tax. But the same thing is already happening in our corporation tax and is bound to become still more important in the case of any separate state income taxes of the future. Even, however, if we have federal control or federal administration of the income tax or of the inheritance tax,

the need of some group or associated action in our states will be almost equally great; for if we should ever come to the idea sketched out above, of state additions to the federal income or to the corporation tax, there would be obvious difficulties and dangers in the way of one state making, let us say, a 1 per cent addition to the federal tax and of an adjoining state making a 5 per cent or 10 per cent addition. The risks of a transfer of business or enterprise or population from the one state to the other would be as great as at present when one state finds that unequal fiscal burdens lead to interstate migration. The practical lesson from this is that we should sedulously strive to develop the idea which is now already found in germ, the idea of coöperation between various groups of contiguous states, the idea of sectional or group associations of tax commissions such as the New England group, the central state group, etc. With this device, and with proper centralized administration, each state may be put in a position to judge of the best way to adjust its own tax system harmoniously to the interests of the whole group of states of which it forms a part. I should put this idea of interstate comity in taxation and of interstate coöperation of tax commissions at the very forefront of our present needs.

The above presentation shows how vital are the problems of fundamental importance in our present-day development. Almost every practical step that is taken by anyone in the direction of tax reform will be found to fit into one or other of the lessons that I have sought to emphasize. May our steps enable us to see each point more clearly with the lapse of time and may there emerge from this multiplicity of movements and of interests a unity that will make for fiscal justice and civic equality.

THE UNDERWOOD TARIFF ACT AS A PRODUCER OF REVENUE

BY ANDREW J. PETERS,

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(Member Ways and Means Committee which reported the Underwood Bill.)

The tariff policy of this government in the last thirty years has been, with one exception, a frank adherence to the protective policy. Its purpose has been to protect the industries of this country and to raise a revenue.

The economic developments which followed the year 1897 increased the dissatisfaction of the country with the high protective system, and while it would not be accurate to assign these developments exclusively to the tariff act, it was generally accepted that many of the more unfortunate features of our industrial life in that period were aggravated by the high tariff.

As a result of the reaction from these and other political forces there was put in power a party which prepared a tariff bill drawn on the theory of a competitive tariff. In presenting the bill to the House of Representatives, Mr. Underwood stated frankly that the rates were placed on a revenue basis, not on a protective one.

The success or failure of the lower tariff theory may not improperly be considered from the point of view of the revenue which it produced. I shall confine my observations, therefore, to the point of view of the Underwood bill as a producer of revenue, and shall make no attempt to consider the other aspects of the tariff situation.

The problem of presenting clearly the revenue returns from the tariff bill is not without its difficulties. Factors other than rates of duty enter into the equation. It is always difficult to estimate in advance the revenue which a given rate will produce.

The revenues under the same law with no change in rates vary from year to year. In some instances in the past there has been a change of more than \$40,000,000 in a single year. This happened in 1908. The revenues for the fiscal year 1907 were \$332,233,362 while for 1908 they were \$286,113,130, a drop of \$46,120,232, with no change of law. Again in 1911 the receipts from customs fell nearly \$20,000,000 below those for the previous year, with a further decline of over \$3,000,000 in 1912.

For the past five months business conditions have been so disturbed by the war in Europe that it is difficult to form an estimate of the effect on the revenues from customs and collections under the income tax provisions of the Underwood law.

It will be seen, however, from a study of the figures, that the Underwood bill had, up to the beginning of the war, produced all or more than the revenue expected of it at the time of its creation.

The Ways and Means committee in its report on the Underwood bill estimated the receipts from customs, for the fiscal year ending June 30, 1914, at \$270,000,000 and the receipts from the income tax at \$95,000,000, while the actual collections were, from customs \$292,128,527, the receipts from the income tax \$71,381,275, a total of \$363,701,289. The receipts from customs were more than \$22,000,000 in excess of the estimate, while the receipts from the income tax were about \$24,000,000 less.

That the receipts from the income tax were below the normal is due to the fact that many incomes are derived from interest and dividends payable on July 1 and January 1, and on such incomes the tax accrued for only four months of the year, from March 1 to July 1. The amounts of such interest and dividends payable on January 1, 1914, were not included in the returns for the fiscal year ending June 30, 1914, but will be included in the returns for the present fiscal year.

For the fiscal year ending June 30, 1915, it was estimated that the receipts from customs would be \$250,000,000. This reduction of \$20,000,000 in the estimated revenues is due to the fact that for three months of the fiscal year 1914 duties would be collected under the higher rates of the old law and that the provisions for free wool did not take effect until December 1, 1914, and the reduced rates on manufactures of wool and sugar until January 1 and March 1, respectively, 1914.

The receipts for the first six months of the fiscal year 1914 have been only a little in excess of \$107,500,000, indicating receipts of \$215,000,000 for the fiscal year or \$35,000,000 below the estimate of the committee. It must be remembered that such estimates were made at about the time of the passage of the tariff act and before any international complications were anticipated.

This falling off is undoubtedly due to the effect of the war in Europe on commerce generally, and particularly of imports from the

belligerent countries. The imports from these countries are chiefly manufactured articles subject to the higher rates of duty and the value of the imports from France, Germany, Austria, Hungary and Belgium has fallen off approximately \$70,000,000 as compared with the previous year.

The estimate of the treasury department indicates an expected falling off in revenues for the current financial year from customs of \$100,000,000 on account of the war,—an estimate which the receipts so far indicate to be not far from correct.

The receipts from customs, however, have maintained themselves at high figures when one takes into consideration the tremendous disturbance of the commerce of the world which war conditions have created.

The duties collected for the first six months for the fiscal year 1915 as compared with the preceding year are as follows:

	1915	1914	Loss
July.....	\$27,806,654.00	\$22,988,465.00	\$4,818,189.00
August.....	30,934,952.00	19,431,363.00	11,503,589.00
September.....	26,794,494.00	17,225,887.00	9,568,607.00
October.....	30,138,049.00	16,271,829.00	13,866,220.00
November.....	21,173,628.00	16,924,408.00	4,249,220.00
December.....	21,510,140.00	14,890,982.00	6,619,158.00
Total.....	\$158,357,917.00	\$107,732,934.00	\$50,624,983.00

The loss of \$50,624,983 for the last six months of the calendar year 1914 contrasts with a loss for the first half of that year of \$18,542,359.

It appears fairly certain that the income and corporation tax for the present fiscal year will reach \$80,000,000, receipts from customs \$215,000,000, which makes a total revenue under the Underwood law, notwithstanding the disturbed conditions due to the war, of \$295,000,000. A result which indicates that under normal conditions the Underwood bill will produce all the revenues expected of it.

SOME ASPECTS OF THE INCOME TAX¹

BY MORTIMER L. SCHIFF,

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In considering the income tax, the subject may be discussed either in the abstract to determine whether any income tax constitutes an advisable method of taxation, or accepting the principle that such a tax is sound, the law imposing it may be examined to see whether it is so framed as to provide for a form of taxation, which is equitable in its application and desirable in its methods of administration and of collection. Since I have been asked to treat the subject primarily from the point of view of the business man and to discuss the practical workings of the law, rather than its theory, I shall not enter into the question of whether an income tax as such is an advisable method of taxation, although I am inclined to favor this form of raising revenue for the government, if the tax is equitably levied and administered. For the same reason, I shall not touch on the very interesting economic question of whether income derived from investments should be taxed differently from that resulting from personal service.

It may safely be assumed that taxes are generally unpopular among those upon whom they fall, but it is the function of government, particularly in a democracy, such as ours, to so levy and administer them, as to cause the least possible hardship and to so distribute them as to make every citizen pay his or her just proportion of the expenses of the government and of the protection enjoyed. We have become so accustomed to having the income of our government provided by customs, internal revenue and other forms of indirect taxation, that any direct tax is bound to be disliked. We are not used to the parental form of many European governments and, therefore, an income tax, with its resultant inquisitorial methods and prying into the affairs of individuals is, from its nature, bound to cause dissatisfaction, a large part of which is possibly unwarranted. We have, however, the right to expect that the tax should be fairly applied and should be administered in such a way as to cause the least possible friction and hardship and a minimum of expense in its collection.

¹This article was written in November, 1914.—The Editor.

It is the duty of every citizen to do his part towards maintaining the government under which he lives, but he should be relieved from unnecessary exactions.

Adam Smith, in *The Wealth of Nations*, has given certain maxims with regard to taxation, which have become almost axiomatic in their general adoption. Among various rules, which he lays down, are the following, namely, that the subjects of every state ought to contribute towards the support of the government as nearly as possible in proportion to their respective abilities, that is, in proportion to the income which they respectively enjoy under the protection of the state; that every tax ought to be levied at the time and in the manner in which it is most likely to be convenient for the contributor to pay it; that every tax ought to be so contrived as both to take out and keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state. Applying these particular rules to the income tax, as imposed by our law, we find that it meets none of these requirements. The citizens of this country are not required under our laws to contribute towards the support of the government as nearly as possible in proportion to their respective abilities. The tax is levied in a manner which is not generally convenient to the contributors who pay it. The expense of collection is so great that the tax is not so contrived as both to take out and keep out of the pockets of the people as little as possible over and above what it brings into the public treasury.

According to figures, made public by the secretary of the treasury on October 23, 1914, 357,598 individuals, of whom 278,835 were married and 78,763 were single, paid income tax for the period ended December 31, 1913. This is considerably less than one-half of 1 per cent of the population of the United States. Even assuming that each one of those married represents a family of five, we find that the tax was paid in respect to the income of some 1,472,938 individuals, or, in other words, that about 98½ per cent of the people of the country escaped this form of taxation. As comparatively few pay any other form of direct tax, the result is that the great bulk of our population contribute nothing directly to the state. Experience in other countries, where an income tax is an established means of taxation, has shown that the rate of such a tax steadily increases as the demand for revenue by the state becomes greater, and it is to be presumed that there will be the same tendency in the United

States. There is danger in having a tax, which already forms a substantial part of the income of our government, and which probably will be called upon to provide an increasing portion of the expenses of the nation, fall upon so small a percentage of the population. This tends to encourage extravagance in government, as legislators are more apt to incur additional expenditures, when the revenue to meet them is secured by increasing the amount contributed by comparatively few of the people of the country, while they would be likely to hesitate to do so if this necessitated the placing of additional burdens upon the entire citizenship. But even a greater danger lies in the very fact of the popularity of the tax among the great mass of our people through their escaping this form of taxation. When the matter recently came up for discussion as to how to increase the revenue of the government, in order to make up for the falling off of customs receipts, the very first proposition was to increase the amount of the income tax. This met with considerable favor, but the proposition that the exemption should be decreased met with instant objection.

To examine all of the details and possible criticisms of the law would lead too far, but attention may be called to a few of the points which have arisen.

In the case of married people living together, only one exemption of \$4,000 can be claimed, even though they have separate sources of income. While the act itself simply provides that but one exemption can be claimed, the regulations go further and provide that either one return shall be made of the income of both, or that if separate returns are made, one shall be attached to the other. Cases may arise where one of the parties is unwilling to disclose his or her income to the other and it hardly seems justifiable that the regulations should read something into the act which is not written there. Would it not be better to allow a definite exemption to each individual, whether married or not, who enjoys a separate source of income, with possibly an additional exemption for dependent wife and children?

The act provides that living expenses may not be deducted from the taxable income. On the other hand, the farmer, a part or all of whose crops are consumed as food by himself and his family, is not required to include in his income the value of the crops thus consumed. He is, therefore, to that extent receiving an allowance for living expenses.

Under the most recent ruling, it is not permissible to rate securities, and losses can be charged against income only when actually incurred, although even that is now questioned, unless the losses are sustained in the business in which the taxpayer is engaged. There seems to be no good reason why investors should not have the option of either keeping their books on the basis of carrying securities at actual cost and charging losses and crediting profits, as they arise, or of valuing their holdings at the market price once a year and either crediting or debiting income, as the case may be, with the increased or decreased value, as established by such prices. This privilege was extended to corporations under articles 111 and 135 of the Regulations, which permitted corporations not only to rate securities, but also to amortize bonds purchased above par, so as to maintain them on the interest basis on which they were purchased. Under the most recent ruling the privilege extended under article 111 of the Regulations has been withdrawn and it is now ordered that in computing the amount of their taxable income, corporations may take into account only actual profits and losses. Needless to say, every individual having once chosen the method he wishes to adopt should be compelled to maintain that method year by year, although it might be provided that upon giving sufficiently long notice, he should be authorized to change his system of accounting. Even under the provision that only actual losses or profits can be taken into account, many complications arise. The following example is only typical of the difficulties encountered in construing the law. A man buys, let us say, 100 shares of stock at \$120 per share. A few weeks afterwards, he buys another 100 shares at \$110 per share and then sells 100 shares at \$115 per share. Has he lost \$5 per share on his original purchase, or has he made a profit of \$5 per share on his second purchase, or has he come out even in respect to half of his holdings as against his average cost?

The law in specifying income covers it not only as received, but as accruing. It is not clear whether the reverse is provided for, namely, whether accrued interest included in the purchase price of securities can be deducted from the interest when received. According to the language of the act it seems as if, in the case of bonds purchased say on June 1st for a stated price, the buyer would have to report as income a full six months' coupon collected on July 1st, notwithstanding the fact that five-sixths of such coupon has

been paid by him to the seller, as part of the purchase price, while the seller would escape taxation in respect to that part of his income. There has been no authoritative ruling on this, although it has been informally stated by the treasury department that the buyer need include only the proportion of the interest actually received by him and that the seller is liable for the tax on the amount of interest which he received as part of the purchase price. In the case, however of bonds, the tax in respect to which has not been assumed by the debtor corporation, the amount of the tax will be deducted from the coupon, when presented by the buyer, with the result that he must, in order to protect himself from loss, deduct from the purchase price the proportionate share of the tax chargeable to the seller. If the seller claims that he is exempt, while the buyer is not, the resulting complications and difficulties become even greater.

The act provides that corporations may deduct from their gross income the amount of interest accrued and paid within the year on their indebtedness to an amount of such indebtedness not exceeding one-half of the sum of their interest-bearing indebtedness and their paid-up capital stock outstanding at the close of the year. If the intent of this provision was to legislate against corporations, which have only a nominal capital stock, in order to reduce the amount of their taxable income, it seems as if that purpose could be fully covered by making this provision apply only to corporations incorporated after the passage of the act, as there seems no sound reason why corporations in existence prior to that time should not be permitted to deduct the entire amount disbursed by them in interest on their indebtedness.

The provisions in the law as to the method for arriving at the taxable income of corporations show that it has been attempted to do by indirection, what it has been urged to do by direct legislation. It is clear that by the provision forbidding corporations to deduct from their net income dividends received from other corporations, it was intended to discriminate against holding companies. It hardly seems fair that companies, which by the nature of their business, or through the location of their property, are compelled to hold portions of their property in a perfectly legitimate manner through the medium of another corporation, should be penalized for doing so, in order to meet public clamor against what are generally known as holding companies. It is not within the province of this discussion

to enter into the question as to whether holding companies, as such, are desirable, or not, but it must be conceded that in many instances it is necessary for one corporation to hold the stock of another. Why, therefore, should there be a penalty when a perfectly proper purpose is fulfilled? Take, for example, the case of a railway corporation, which owns a line in the state of Texas, which it can hold under the Texas law only through a Texas corporation. The latter must pay the income tax of 1 per cent upon its net income and then the parent company must again pay the same tax on dividends received, with the result that a tax of 2 per cent must be paid in respect to this part of its income.

The law provides for the collection of the tax at its source, in respect to certain classes of income, and this has given rise to the greatest cause of complaint. The intent of the law is that, so far as possible, the payer of income and not the recipient, shall be held responsible for the payment of the normal tax. This method of collection is an importation from Europe and is copied, to a great extent, from the provisions of the English income tax law. It has, however, apparently been overlooked that in England substantially everybody, except the person dependent upon daily wages, is taxed and that practically no one in receipt of any other form of income is exempt. The framers of the law have also failed to take into account the difference in the size of the two countries and in their methods of business. They have failed to take into consideration the methods by which collections of income are made here; of the manner in which coupons on American bonds are collected; of the fact that most coupons in this country are guaranteed tax free and of the wide diversification of investments by even the class of small investors.

I am frank to say that the provisions for collecting the tax at the source have proved less troublesome than I feared, when, as a member of the committee, I participated in May, 1913, in framing the report on the income tax of the committee on finance and currency of the Chamber of Commerce of the State of New York. This has been due, however, not to the provisions of the law itself, but to the possibly temporary rulings of the treasury department. During the first few months of the operation of the law, these provisions proved very burdensome, due, among other causes, to the variety of forms, to the lack of uniformity in their printing, to the

doubt existing as to many points of the law, to the new and revised instructions issued from day to day, to the necessity of stating bond numbers on certificates, to the impossibility of knowing how much in the way of records and reports the government might require and what information and records withholding agents and debtor corporations would need for their own protection and also to the difficulty of securing the coöperation of the public. The regulations gradually became simplified and, after six months' trial of ownership certificates, the treasury department revised the list of certificates for the purpose of eliminating repetition, as well as of standardizing the certificates, as a result of which the method of procedure has become considerably simplified. In this process of revision, the number of certificates to be used has been reduced from 19 to 10. The regulation requiring that numbers of bonds be written on the certificates, after being enforced during the first few weeks of the operation of the law, has now been rescinded, the last ruling having waived this provision until further notice. The advantage of enforcing this regulation is so questionable and the task so unwieldy, that it is to be hoped that this requirement will be eventually waived altogether.

The collection of the tax at its source forces the disclosure of investments to others, which is objectionable to our own citizens and to some extent at least militates against American investments by foreigners, who are disinclined to give this information.

Under the scheme of certificates, to be executed when collecting coupons, it was at first required that non-resident aliens, claiming exemption, should attach certificates to their coupons, giving their names and addresses, even in the case of bonds issued exclusively in foreign currencies and held entirely abroad. Later this was modified and the treasury department ruled it would be sufficient if a responsible bank or banker executed the certificate, provided it was accompanied with a list of the names and addresses of the individual holders. Since then there has been a further modification and the ruling, now in force, permits banks and bankers to use a form of certificate, which does not require the names of the holders to be disclosed. The banks and bankers must, however, agree to furnish the names, if requested to do so. Even this is, in many instances, not possible, as foreign banks or bankers paying such coupons on behalf of American corporations can themselves only secure the information as to who are the individual holders of the obligations, if the holders are

ready to declare themselves. This they are frequently unwilling to do, as under the terms of the bonds which they hold, they have the absolute right to receive the interest, without any deduction for American taxes, and therefore see no reason why they should give information to others as to their investments. This is particularly the case in France, where securities are scattered among a large number of small investors. The result is that, failing to secure proper exemption certificates, the American corporation may be held liable to our government for the tax, even though by the nature and form of its bonds, to which the interest appertains, it is perfectly clear that the bonds are held by non-resident aliens.

The machinery provided by the law is so cumbersome and complicated as to make it difficult of comprehension to the average person and has placed a burden upon collecting agencies, which is out of all proportion to the amount collected by them. As the tax is administered, it has become necessary for all those who collect interest and dividends to create additional machinery for handling the large amount of extra work involved and, as a result, all such agencies have been placed under heavy expense. It does not seem fair that the government should force corporations and individuals to bear this expense and do work, which properly belongs to the government, without compensation.

In England this has been recognized to some extent at least by the allowance of what is commonly known as "poundage" to those collecting foreign dividends. The English law provides that a person entrusted with the payment of dividends, who shall perform all necessary acts, so that the income tax thereon may be assessed and paid, shall be entitled to receive as remuneration an allowance of so much (not being less than three pence) in the pound of the amount paid, as may from time to time be fixed by the commissioners of the treasury. This applies only to dividends, payable out of the revenue of foreign and colonial states and dividends of foreign and colonial companies.

It is interesting to note that the regulations require the debtor corporation to surrender the certificates to the collector of internal revenue monthly, with the result that the corporation is at once deprived of the only evidence it ever possessed for its own protection from tax liability on the interest to which these certificates appertained. Therefore, the only way the corporation has of protecting itself is to undertake the labor and expense of making duplicate lists for its own files.

Experience has shown that it is with considerable difficulty that corporations, whose bonds are tax free and the interest on which is, therefore, payable without deduction of the tax, can secure from the holders of small amounts of these bonds properly drawn exemption certificates to enable the corporation to secure a refund of the tax thus withheld. As a result, the government receives taxes to which, under its own law, it is not entitled. There is little doubt that thousands of ownership certificates covering payment of coupons and registered interest, are executed by bondholders without regard to their own financial condition and that many do not claim exemption, because the company pays the taxes. The bondholder, knowing that the debtor corporation will in any event pay the interest in full, naturally applies his exemption to some other form of income. As a result, the corporation, under the tax free provision, is made to assume the normal tax of such bondholder in respect to that income. A marked example of this is the election permitted by the government to trustees and other fiduciaries to claim or not to claim exemption from collection at the source. Naturally trust estates waive any claim of exemption upon such payments, as they thus throw the responsibility for the tax upon the debtor corporation in virtue of the tax free covenant. In the absence of the tax free covenants, as for example, the collection of rents belonging to trust estates, it has been found that trustees prefer to claim exemption from withholding at the source. As the ultimate liability for taxation depends upon the status of the beneficiaries of the trust, concerning which the debtor corporation has no information or means of information, the practice permitted and encouraged by the government tends to render the debtor corporation liable for taxes, regardless of whether or not the actual beneficiaries of the income are subject to the tax.

The method of collecting the tax has entailed tremendous expense upon corporations disbursing interest to a mass of investors. It has resulted in burdening the companies with a vast amount of additional detailed labor, both in the handling of the prescribed certificates and in the preparation of the monthly and yearly reports to the tax collector. One of the large railway corporations in this country states that the collection of the income tax at the source necessitated more than doubling the clerical force at its coupon and interest desks. This particular corporation estimates that it will have to handle about 100,000 tax certificates per year, of which all

those which show tax liability must be listed monthly in duplicate and each one of these monthly returns requires the signature of the treasurer or assistant treasurer of the company making the return.

It appears that the actual cost to corporations incident to withholding the tax at the source is from 10 per cent to 20 per cent of the amount collected for the government, an imposition upon the intermediary corporation of a very considerable service for the government without compensation. Indeed, in most cases, the companies themselves, on account of the tax free clause in their bonds, are paying practically the entire tax, which under the regulations they are called upon to retain and are thus put to a heavy expense, in order to give evidence to the government why they pay the tax and why it is not greater. It is to be assumed that it costs the government on its part at least as much to receive and tabulate these returns, as it does the corporations to make them and that, therefore, the entire expense involved, covering the collection and recording of the tax thus withheld, amounts to from 25 per cent to 30 per cent of the amount collected.

In the case where interest is not paid by the corporation itself, but through a fiscal agent, such as a bank or trust company, additional expense is involved. Before the income tax law went into effect most of these banks and trust companies, acting as paying agents, considered themselves amply repaid for the work involved by the interest gained by them on the deposit of the funds received for this purpose. In view of the additional work required on account of the income tax law, many of the banks and trust companies have felt compelled to charge the companies a percentage on the amount paid, to compensate them for their trouble.

The case of one of the larger New York trust companies is typical of the burdens placed upon collecting agencies. Of the corporate interest paid by this company during the first six months of 1914, 62 per cent was paid on ownership certificates claiming exemption and 38 per cent on certificates not claiming exemption. In respect of approximately 89 per cent of the interest paid to those not claiming exemption, the tax had been assumed by the debtor corporation and as a result the amount of taxes actually withheld by the trust company itself amounted to less than one-twentieth of one per cent of the total amount of interest collected and disbursed by the trust company during that period. The expense and work

connected with this can readily be imagined and all this to collect for and pay over to the government less than one-twentieth of one per cent of the total amount of interest disbursed by this particular company.

In collecting coupons for depositors, the experience has been that, notwithstanding the increased facilities, there is considerable delay. On the first of every month on which interest is payable, particularly in January and July, these delays extend over a period of four or five days and in some cases even longer, which is naturally very inconvenient to bondholders and in the case of larger holders the loss in interest is considerable.

As illustrating another of the difficulties which withholding at the source entails, mention may be made of notes given in payment of rent, interest or other income. To be certain that any note for an amount exceeding \$3,000 is not issued for such a purpose and therefore subject to deduction, every discounteer of such a note is bound to inquire into the purpose for which it was originally issued, as the regulations clearly state that if a person, in acquiring such a note from a previous owner, has omitted to make deduction of the allowance for the tax, he can look for relief only to the person from whom the note was obtained, as the debtor is required to deduct, withhold and pay to the collector of internal revenue the amount of the normal tax, which may be due thereon.

As to the amount withheld from salaries, it is necessary to make each month a list of those whose salary is in excess of \$3,000 per annum, which in the case of those having a large number of employees is a considerable undertaking. This is required monthly, by reason of the changes in salaries and positions that may take place during the period affecting the amount to be withheld. As the employer is not required to withhold, until over \$3,000 is paid, it is necessary to follow up the salary of each employee receiving more than that sum, to ascertain at what time of the year the first deduction from his pay is to be made. The employer must then obtain from such employee his exemption certificate, if he is entitled to one, and give instructions as to the amount to be withheld. It frequently happens that more is withheld from parties than they are required to pay the government. For instance, in the case of a married man receiving \$5,000 salary, the employer is required to withhold \$10. In the employee's income return to the government, he may, however, show

exemption other than that allowed by paragraph C of the law, and, therefore, he is entitled to a refund from the withholding agent, upon filing a copy of his annual return with such agent. It can readily be seen how much trouble and annoyance this causes both the employer and the employee.

A complication which is only just developing is, that individual bondholders, who reported in their returns for the period ended December 31, 1913, bond interest as having been subject to collection of the tax at the source, are being called to account by the collectors of their districts, who are, of course, unable to verify the return in this respect. Inquiries and complaints received from individual bondholders would seem to indicate that the internal revenue department has neglected or has found it impossible to assemble the information received from different sources as to the income of each individual taxpayer. That is only one of the difficulties in providing for deduction at the source in a country of the extent of ours, which does not exist in a country of a more limited area, such as England.

The officials have gone to the extreme in asking for information, much of which hardly appears necessary or even germane to the act. Only recently a request has been sent out to all corporations to furnish the internal revenue department with a list of preferred and common shareholders, of the number of shares held by each and of the amount of dividends paid to each during the ten months ended December 31, 1913. In view of the fact that dividends are not subject to the normal tax, it hardly seems that any sound purpose can be accomplished by this, and that it was obviously designed to verify the returns of parties subject to the additional tax. In the case of a corporation with many shareholders, the burden thus attempted to be thrown on the corporation was certainly disproportionate to the information of actual value and to any beneficial results which the department could hope to gain. It would have been a comparatively simple matter to furnish a list of those to whom dividends amounting to over a certain amount had been paid, but in order to secure information as to the limited number of large payments, the government required a complete statement of all payments. In the case of one corporation, this requirement involved the preparation as of December 31, 1913, of a stock list of considerably more than 20,000 names, and the preparation of a list of quarterly dividend-payments

during the year to this large number of stockholders, including a comparison of the dividend lists of each of the quarters and the assembling of the payments made in each quarter to each stockholder. On a computation that the preparation of the dividend list alone would involve over one hundred days' work by one clerk and a considerable expense, for which there seemed to be no legal warrant, the position was taken by this corporation that the information would not be furnished without the exhibition of specific legal authority for its request. No attempt has thus far been made to produce such authority and the government has apparently not urged this requirement further, in respect to corporations who have protested.

It is to be remarked that the agency which withholds does not pay the amount thus withheld to the government until the tax itself is payable, namely, in June of the following year. It results from this that the withholding agent has the use of the money thus withheld for a period of at least six months and possibly eighteen months without interest, while the recipient of the income is deprived of the use of that amount for a corresponding period. It should further be noted, that if the withholding agent, through bankruptcy or otherwise, fails to pay the amount withheld to the government, as may readily happen in the case of parties of limited responsibility, the recipient is responsible for the payment of the tax, notwithstanding that it has already been withheld from him.

According to the language of the act, many Americans living abroad can, as a practical matter, escape taxation, even though all their income is derived from American investments. Article D of the act states that a person residing in a foreign country shall make his return in the place where his principal business is carried on within the United States. There is no provision for such a person making his return elsewhere if he has no place of business in this country. Of course, if he fails to make any return and is discovered, he is guilty of a misdemeanor, and yet there seems to be no way provided for enforcing the law in regard to this.

It has recently been ruled that members of a partnership are not entitled to follow up the sources of the income of the partnership and avail themselves of the exemptions to which they may be entitled on certain classes of that income. As partnerships, as such, are not taxed, it would seem proper that such of the income as is

derived, for example, from dividends on stocks should be exempt as to the normal tax in the hands of the individual partner, who receives it.

Embarrassment has been caused in connection with the issue of additional bonds under open mortgages made before the tax law became effective, when such mortgages contain the tax free covenant. Aside from the trouble and expense of making issues of such bonds not subject to this clause, it is very objectionable to have two kinds of bonds outstanding under the same mortgage, one of which is tax free and the other not. The existence of two such classes of bonds adds to the burdens incident to the making and recording of interest payments and requires unusual vigilance on the part of paying agents to distinguish between the coupons appertaining to the two classes.

Eminent legal authorities have called attention to the crudity of the act, but it is interesting to note that since the law has gone into effect, there have been not only the general regulations, consisting of 199 articles, but also 87 official treasury decisions, 26 official letters and 1 executive order, in addition to a very large number of letters and rulings furnished by the commissioner and his assistants in response to inquiries received. Many of these regulations, rulings and decisions are not in themselves clear and in a number of cases they substitute departmental construction for the law itself. For example, under the strict provisions of the act, each party through whose hands income passes, has the right to withhold the normal tax, notwithstanding that it has already been withheld by someone else and, in addition, the recipient of the income in question is also made liable. This provision is so manifestly unfair, that the treasury department has decided not to enforce it. Article 34 of the regulations relieves everyone, except the original debtor from withholding. In other words, the provisions of the law seem sufficiently unreasonable for an administrative branch of the government to nullify it.

The act is silent as to the method to be adopted by partnerships in arriving at their profits or losses, to be divided among or borne by the partners. Even the treasury department seems to be uncertain how to construe the law in this regard and its rulings are quite unclear. The custom of practically all firms, whether dealing in merchandise or securities, is to take an inventory of their assets at the end of their fiscal year in order to determine the results of the year's business. This necessitates valuing the assets at a fair market value,

so as to avoid dividing what may be called "paper profits." The act, which exempts partnerships as such from the income tax, does not provide whether this may be done by partnerships, or not, but under the most recent ruling, which reverses a former one, individuals and corporations are not allowed to do so. There seems to be no good reason why this should not be permitted, as any amount written off in any one year will appear in a future year's income return to the extent that all or part of such amount may be recovered, when the assets, which have been written down, are actually sold. The only possible explanation for not permitting individuals and corporations to reduce the value of their assets to market value, if this is lower than cost, is that it is feared that in a period of depreciation of values, it might result in a heavy falling off of the revenue to be received by the government from the income tax.

The construction of the provision that only losses incurred in trade may be deducted is a curious one. The treasury department has now ruled that it will not permit deductions from income to be claimed for losses actually incurred in the sale of real or personal property, unless the person claiming such deductions is engaged in the business of dealing in the property in connection with which the loss has been incurred. In other words, a merchant, who has invested money in securities or real estate, would not be permitted to deduct from his income the amount lost by him in the realization of such an investment. While the language of the act is unclear in regard to this, it had generally been understood that this would be permitted and it may safely be assumed that the great majority of returns for 1913 by persons who had incurred such losses, were made on this theory. It hardly seems just that the merchant, who has purchased a piece of real estate as an investment and sells it at a profit, must include that profit in his return, while if he disposes of it at a loss, he should not be permitted to deduct the loss from his income, although the professional real estate speculator may do so. The unfairness of this is manifest and it can hardly be supposed that this was the intent of the framers of the law. It shows, however, how necessary it is that the act should be so written as to be beyond misunderstanding, so as to avoid the necessity of having departmental authorities construe it.

Article 43 of the regulations may well be cited as an example of leaving to others the determination of matters, which, according to

the act itself, is vested in the government. By this article, direction is given to withholding agents or others with whom certificates executed by an agent are filed, either to stamp such certificates, that they are satisfied as to the identity and responsibility of the agent or to require evidence as to the authority of such agent to so act. While this is a convenience, there seems to be no warrant for this in the act itself.

It may, however, fairly be questioned whether a law, which is subject to so much misunderstanding and requires so many rulings as to its meaning, is in itself sound. The law is so unclear as to many points that a number of the rulings are in the nature of a compromise and it hardly seems within the function of the treasury department to supplement defects of the law.

The least we have the right to expect is that the law should be absolutely clear as to its requirements and that if it is not, it should be amended to make it so. Apparently the authors of the act had not a very definite idea in their own minds as to just what should be taxed and as to the manner in which the collection should be made. The act is curious in that, while dealing as a whole in generalities, it attempts to go into detail as to certain points, with the natural result of causing further complications. For instance, it particularly exempts losses arising from fires, storms or shipwrecks, not compensated for by insurance or otherwise, but does not permit exemption for losses from floods, earthquakes, war, or other similar happenings.

What is the remedy, and how can the law be improved, so as to prevent unnecessary burdens upon business and be made less exacting in its requirements from individuals? Assuming that the income tax has come to stay and leaving aside the question as to the lowering of the exemption, it seems that information at the source could well be substituted for collection at the source and the tax be directly collected from recipients of income.

The present act provides for the filing of certain returns by individuals and corporations and for the assessment of the tax on the basis of these returns. Why should it not be made incumbent upon each individual to file with the proper authorities a return of his or her entire income from whatever source derived, much as is done under the present act, permitting claims by the individual for such exemptions, as may be provided in the law and then when the actual assessment of the tax is made, make it the duty of the individual to pay his or her own full tax? If a check upon the correctness of these

returns is needed, it could be provided that all those corporations, partnerships and individuals, who pay income to other persons, should file at stated intervals, lists showing the nature and amount of the payment and the names of the persons to whom it was made. This would not require the filing by individuals of exemption certificates with those who pay income and would much simplify the present cumbersome and expensive method, while at the same time it would enable the treasury department to check up the returns of individuals to such an extent as to provide against dishonesty. It is not likely that there will be many cases of understatement of income. The government could be fully protected by incorporating in the law very severe penalties for any deliberate withholding of facts or understatement of income. The work and expense now resting upon paying agents would be much less and the burden of collection would fall on the government, where it properly belongs, and upon the individual who is the person whom it is proposed to tax.

It has been quite impossible within the scope of an article, such as this, to cover the ground thoroughly and to show all the defects of the law. It seems clear, however, that the act needs revision to remedy its faults and to make its requirements readily understood. Such a revision should preferably be undertaken by a paid commission of experts, as no congressional committee, with the limited time at its disposal and the pressure of other matters, can adequately deal with so intricate and complex a subject. The congressional committee might well determine the broad principles of the law, but the act itself should be drafted and its details worked out by experts, who could then report their conclusions to the committee for submission to Congress.

I would summarize as follows:

1. The exemption is too high and should be reduced to such a figure as to make only those exempt who have substantially no source of income, except their wages.
2. The system of collection at the source should be abandoned and a system of collection from the recipient substituted, with information at the source and severe penalties for false statements.
3. The law should be so clarified as to make it comprehensible to the average person, so as not to require administrative departments of the government to construe it or to correct its defects; a method which is dangerous in itself and is certain to lead in time to endless litigation between the government and its citizens.

AMENDING THE FEDERAL INCOME TAX¹

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Cornell University.

There is every reason to believe that the new federal income tax is to be a permanent part of our fiscal system. Its framers doubtless intended that it should be and the American public apparently has no other expectation. Not only does the experience of other countries confirm this probability of indefinite continuance, but it indicates, also, that this tax will grow in importance with the passing of time. Deep-rooted changes now taking place in American economic and political conditions all point emphatically in the same direction. In fact, in a degree more than most of us seem to realize the relative importance of the income tax seems destined to increase while that of our hitherto most important federal taxes is almost sure to decrease.

In view of the not improbable relative decline of revenues from other sources and of the constantly increasing demands for greater and more varied expenditures and, further, in view of the fiscal possibilities of a wisely-drawn and administered income tax, it is of great importance that we lay broad and firm foundations and that the entire structure be carefully built and tested as we proceed. In order to found thus firmly and build thus carefully, it is well to keep in mind that a *sine qua non* of a good tax is efficient administration, hence everything that seriously interferes with such administration is to be avoided. A corollary of this is that not everything should be attempted at once. What not to do and when to do are almost as important as what to do.

We have now had a year's experience under the new law, a year that has brought forth interpretations both good and bad and one that has shown actual fiscal results. But no one has observed any exultations over these fiscal results. Analyze the figures as one may,

¹ It should be stated that this article was written with the expectation that it would appear in January, 1915. It was prepared in November, 1914, and only the facts available at that date have been included by the author.—The Editor.

conjure up all the allowances that can be imagined as probable, and still one strives in vain to become enthusiastic over the meager receipts from individuals.

But while not being a cause of enthusiasm, our experience to date is far from being a cause of pessimism. It has been too brief and conditions have been too abnormal to attach undue importance to it one way or the other. Other experience has shown that no such tax approximates its maximum yield the first year, and it will be recalled that the first collections in this case covered only five-sixths of a full year. In the cases of many annual, semi-annual, and quarterly receipts, a large part of the income for this ten-months period probably fell due January 1, 1914, or later, and, hence will not be returnable till 1915. Furthermore, it must not be forgotten that the law went into effect within less than a month after its passage, that the larger number of its administrators were necessarily inexperienced, that for individual incomes they had no previous records comparable to the usual records which new assessors find when coming into office, and that they were required to cover a wide diversity of incomes of a great number of individuals scattered throughout a vast expanse of territory.

To note all of these considerations is not to deny that receipts were disappointing nor to claim that administration was perfect. Rather it is to indicate the great possibilities of improving administration and the inexpediency of adding too many refinements and complications before such improvements can be made. Considering the inexperience of our legislators in this field of taxation and the political exigencies under which the law was passed, it is fortunate that Congress produced a measure so generally sound in its fundamental principles and chief provisions. It is not at all surprising that the law contains defects nor that its administration is imperfect.

Proposed amendments of the law may perhaps be grouped into three classes: first, those suggesting substantial alterations in the fundamental principles and main provisions; second, those contemplating changes of secondary importance, for the most part involving applications of the main principles; and, third, those concerned mostly with obscurities, oversights, inconsistencies and other textual defects. It must be admitted that this classification is somewhat arbitrary and that a discussion of one class, especially of the first, involves some discussion of the others; nevertheless, there seem to

be sufficient grounds for making the classification if only to emphasize the differences in importance of proposed changes.

As regards such fundamental matters as definition of taxable income, rates, exemptions and methods of collection, it is our opinion that the law is essentially sound as enacted. All of these matters, especially the method of collection and the exemption of \$3,000 (or \$4,000), have been vigorously attacked and many amendments have been suggested. Inasmuch as we have discussed these matters elsewhere,² especially the latter, brief summary statements may be resorted to here. Although the high exemption makes the income tax somewhat of a class tax, it offsets rather than increases existing inequalities; furthermore, the great difficulties of administration inevitably connected with the inauguration of so inclusive a tax justify minimizing, in the beginning, the number of incomes and the complexities of exemption, deduction and differentiation. This makes the tax applicable to a comparatively small number of incomes which are easiest to assess, most able to pay and most fruitful in yield.

There is little doubt that the question of amending this feature will come up in the near future, probably at the next session of Congress. In fact, this question was considered in connection with the recent bill for making up the deficiency in customs receipts but it was rejected, it was said, because such a change would not bring in funds till June 30, 1915; hence, quicker measures were adopted. The reduction which seems most likely to be adopted is one of \$1,000, making the exemption \$2,000 for single persons and \$3,000 for married couples.

The wisdom of such an amendment depends largely upon the efficiency of administrative machinery and the application of the proceeds. Even after such a reduction, the exemption would be too high to allow the tax to affect directly the great mass of voters, hence such a change would probably not be politically impracticable. Nevertheless, it would arouse a great deal of influential opposition that might better be avoided till the tax is more firmly established in popular opinion.

Considerations of administration would not justify many years of delay in making such a reduction and demands for revenue may

² "The Income Tax Exemption," *Outlook*, January 31, 1914. "Income Tax Discrimination and Differentiation," *South Atlantic Quarterly*, July, 1914. "The New Income Tax," *American Economic Review*, March, 1914.

more than counterbalance arguments for any postponement but, unless there are such urgent and legitimate demands, one or two more years under the present law would promote ultimate efficiency. It is probably true that a large proportion of incomes near the margins of exemption are just within, rather than just without, the exemption. Even a reduction of \$100 or \$200 would probably catch a large proportion of these. The present requirement that all incomes of \$3,000 or above be returned (reported), even though many of them are exempt under the \$4,000 provision, should furnish records that will be of much service if the exemption is lowered. It would greatly add to the completeness and service of such records to require returns of all incomes down to \$2,000 for at least two years before reducing the exemption.

The indications are that, under the present exemption, there are a large number of incomes not correctly reported to which the administrative force should devote a great deal of attention for another year or two and thus clean up this area, so to speak, before adding another much larger and more difficult section to the field. Inasmuch as the distribution of incomes is pyramidal in shape, each lowering of the base causes a vast increase in the number included. There is possibly some truth, though not all of the truth, in the contention that those with small incomes are the worst dodgers of the income tax because those with large fortunes would be too conspicuous marks for the attention of the special agents of the treasury department who are and have been for some time on the lookout for such dodgers. At any rate, the additional incomes included by the suggested reduction in the exemption would greatly increase the difficulty of administration which is yet far from perfect.

What would be the fiscal results of such a reduction? A press report just at hand states that 357,598 individuals made returns for the past year. It is not stated whether this means all returns including those with incomes of \$3,000 and above but who do not pay taxes because of the \$4,000 exemption, or whether it means taxpayers only. If the latter, each of these individuals would pay an increase of \$10 per year with the lower exemption (assuming income to be constant); the maximum tax paid by those newly included would be \$10 each, those near the lower limit paying scarcely anything (still assuming incomes the same as before the change). If a reduction of \$1,000 in the exemption should include as many addi-

tional incomes as the total number already making returns, there would be a probable increase in receipts of about \$6,000,000. Of course, it is a mere guess as to how many additional incomes would actually pay the tax.³

When the administrative machinery is in shape to collect the additional amount efficiently, then it will be more equitably secured through such a reduction than through some tariff rates that still remain, but if such additional revenue does not mean a lowering of other taxes, or an application to real needs but merely so much more for the congressional pork barrel, then there is no justification for it. Later on, if the main exemption is put very low, it would be well to make some special exemptions for children in certain cases, and possibly also, for insurance payments and other causes of expenditure which it may be thought best to encourage.

In any case, there is a textual ambiguity in the paragraph of the statute which provides for the \$3,000 (or \$4,000) exemption about which there is no doubt as to the desirability of amendment. As it is, it is uncertain whether a married couple should have a possible total exemption of \$4,000 or \$7,000; that is, whether, individual income or family income should be taken as the basis of computation. The ruling of the commissioner of internal revenue is that family income is to be taken as the basis of the normal tax, but individual income as the basis of the additional tax. This is admittedly inconsistent. Even the administrative officers have advised clearing up this difficulty.

Many of the principles applicable to the proposals for amending the exemption are also applicable to those relative to changing the rates. It cannot be proved *a priori*, nor from the brief experience of a year, that the existing rates, or any other more or less arbitrary set that might be adopted, form the best possible schedule. But other experience has proved that low rates cause much less fraud and evasion than high rates and there could be no surer way of destroying the usefulness of the tax than to make rates high before the administrators have secured rather complete and accurate information as to the taxable incomes in the United States. Such information should be secured as rapidly as possible and, after that is done, there would

³ Later press reports showing distributions of 1914 tax returns indicate great uncertainty as to number of new incomes that the suggested return would include.

be an excellent opportunity to make the income tax an equalizer of receipts and expenditures, merely by adjusting the rates from year to year. That is, this would be the case if such a proposal did not imply a budgetary control that seems impossible under our form of government. As it is, there is always the danger that increased revenue possibilities mean increased government extravagances.

As to the method of collection, it is probable that there will be some attempts to substitute information-at-the-source for collection-at-the-source, that is, corporations and other sources, instead of withholding the tax, will inform the government officials of the amount of income paid by them to various individuals. In so far as the recipients of such incomes can be easily located within the United States, such a substitute might be entirely feasible. It would lessen the burden now thrown upon withholding sources and would not deprive the taxpayer of the use of his money for so long a time. Furthermore, it would not throw upon him the risk of solvency of his debtor source from the time the tax is withheld until it is turned over to the government, sometimes a matter of more than a year and in most cases several months. Such a method could not be applied in cases of unregistered bonds and interest coupons nor in other cases where the recipients were without the jurisdiction of the United States. It would probably mean a somewhat greater expense to the government and also some additional evasion and loss. Its adoption seems of somewhat doubtful expediency, though in case of great demand for it, a trial that would be distinctly understood as tentative might be given for a year or two. This would imply more experience with the present method than we have so far had, in order to have a basis for comparison of results.

In this connection, it should be mentioned that many of the forms used in connection with statements of ownership, claims for exemption and returns of income have already been revised, and it is claimed that the burden thrown upon taxpayers and withholding agents will be very much less than heretofore. Furthermore, there is some probability that withholding agents will be allowed a certain compensation for the burdens of collection, say, one per cent of what they collect. This might not be more than fair, though just what differentiations should be made in cases of corporations is not easily determinable. It may be recalled that our tax, as it is, allows corporations to deduct interest on bonds which is not the case in many other countries.

There are two differentiations against corporate incomes under the present law that do not seem wise in all cases, first, the differentiation against the small owners of corporate stock to whose dividends the exemption is not allowed to apply and, secondly, the multiple taxation of holding company receipts. The first involves not only differential treatment of corporate incomes and discouragement to small investors therein but, in practice, it also involves differential treatment of individuals. The second assumes holding companies to be bad *per se*. It is to be admitted that such companies have a good many sins to account for, but the hearings on the recent anti-trust bills and other facts establish a strong presumption in favor of holding companies in some cases. It is entirely probable that Congress will make some modifications as regards railroads and other public service corporations.⁴

English, Prussian and other income-tax laws provide for a differentiation between earned and unearned or funded incomes, laying heavier rates upon the latter. We should adopt this principle soon, but administrative considerations are against adding this additional complication for a year or two. As a matter of fact, we already have a large degree of such differentiation because most funded incomes in this country arise from corporate sources and real estate. Besides the differentiation of the income tax against the former, there is a similar and growing tendency in state and local taxation and it is notorious that a heavier burden has been piled upon real estate with the breaking down of the general property tax. The other large sources of funded incomes are government bonds. A large proportion of federal bonds are held by national banks and as regards these and all others, additional taxes upon their interest would be reflected in higher rates or lower prices for the issuing governments.

Roughly speaking, the law's conception of taxable income in-

⁴ The writer cannot wholly agree with the statement of Professor Seligman (*Income Tax*, 2nd ed., p. 695) that requiring corporations to pay the tax on interest of bonds which they had sold under guarantee that buyers would be free from such a tax mulcted the wrong person, that is, the corporation or its stockholders, instead of the bondholders. If that were entirely true, there would have been no point in guaranteeing the bonds to be tax-free. In paying the tax, the corporations or their stockholders are merely paying what they contracted to pay, if necessary, in consideration of a higher price for bonds. No doubt they hoped the lightning would not strike, or that the time should be long delayed, but everybody had seen plenty of warning flashes.

cludes only monetary receipts, those from personal exertions and net gains from capital. Gifts and non-monetary income are excluded. For example, the law disregards home-consumed produce of the farmer or rental value of a residence occupied by the owner, though produce sold for cash or rent actually received or paid in cash are required to be accounted for in income-tax returns. In most cases it is probably most practicable to confine returns to monetary incomes and to those easily and fairly accurately convertible into money equivalents, otherwise it would lead to the impossible task of estimating the money value of all psychic incomes. It does seem, however, that the rental value of residences is one of the forms of non-monetary income that it would be practicable and desirable to include, though such an amendment to the rulings might well be postponed a year or two for the same reasons that have been mentioned in connection with other refinements.

The ambiguities in the statute relative to insurance companies seem to have been straightened out fairly well in the rulings. The net result now appears to be that the companies will have to pay an income tax on only the excess of premiums over expenses of carrying on the business and payments on policy contracts, plus a tax on interest received on such excess. This means practically no taxation upon capital as opposed to income, and the tax will be even less in some cases by virtue of the exemption of legally required reserves. No amendment seems desirable in this case unless it would be to put in the form of statute what now rests upon rulings. This is of doubtful expediency.

The statute is indefinite and the rulings are inconsistent, as well as unsound in some cases, as to the treatment of appreciation and depreciation of capital assets. The statute requires the inclusion of all income and provides for deduction of losses incurred in trade or arising from fire, storms or shipwreck. Some rulings hold that corporations may adjust the book values of their securities from year to year and return income accordingly. Others hold that all fluctuations in capital assets, whether of corporations or individuals, at least so far as losses are concerned, are not to be considered in returns, unless the results of actual sales, closed transactions. Furthermore, one ruling holds that losses from sales of real estate cannot be deducted unless incurred "in trade," that is in "business," and, that a single transaction does not constitute the carrying on of a business.

Another ruling holds that increases in value of real estate are to be prorated equally among all the years owned and that the part thus apportioned to the years since the tax has been in force is to be returned as the income of the year of sale. The ruling appears to be especially for corporations and will be fair enough for them since they have no yearly exemption and pay no additional tax. But for individuals, it will be important whether such gains are lumped into one year's return or distributed over several years. The problem is undoubtedly a difficult one from a practical standpoint but the present status is susceptible of considerable improvement.

There is considerable weight in the arguments against the injustice of the double taxation involved in taxing all citizens whether residing at home or abroad and also all residents whether citizens or not. Perhaps the easiest way, if all nations would agree to it, would be to tax according to the situs of the source of the income, though a resident undoubtedly receives many benefits from the government where he lives and owes it some duties, even though all sources of his income may be located in other jurisdictions. He also owes some duties to his home government and may put it to great expense as the present European war has forcibly demonstrated in case of our absentee citizens.⁵ An equitable distribution of taxes in such cases is one of the unsolved problems of taxation.

The rulings of the commissioner of internal revenue permit non-resident aliens to escape taxes on interest and dividends of domestic corporation securities. The ruling as to dividends is ambiguous, though it probably means that the foreign holder of domestic stocks shall not pay a tax in addition to the one paid by the corporation. As to bonds, the ruling is of doubtful constitutionality, as the legal situation is anomalous. As to both bonds and stocks, the ruling is economically unsound if situs of the tangible source of income is to hold, and it is certainly inconsistent with some provisions of the statute as well as with some of the rulings of the commissioner. Such exemptions have the justification that they attract the investment of foreign capital. They thus discriminate in favor of foreign investors

⁵ Incidentally, the European war has been of great aid to income tax officials in ascertaining the names, location and status of citizenship of many Americans abroad. Passports have been applied for as never before, so that present records of Americans abroad are unusually good. Perhaps the number who would have claimed expatriation has been considerably reduced.

and certain domestic corporations, just as do certain laws and winkings of various states and localities within the United States in order to attract capital. This is one of the most insidious and irresistible methods of making local taxation ineffective and is one of the most powerful sources tending toward centralized as opposed to local self-government.

As to desirable textual amendments, as well as some minor matters of principle, we have seen no suggestions so comprehensive and worthy of consideration as those in the recent report of the American Bar Association's Committee on Taxation. We will mention only a few of the criticisms which are well taken. The arrangement of the provisions of the statute is haphazard, references are unnecessarily difficult to make and the lack of system can only be remedied by an entire recasting of the act. Various terms or phrases are ambiguous or are used with several different meanings in different parts of the statute, for example, "deductions," "exemptions," "arising or accruing." Certain enumerations in the law are either more restrictive than intended, or than they should be, especially in view of the fact that they have been interpreted strictly. This applies particularly to the losses and exemptions allowed. For example, the exempting enumeration names mutual building and loan associations, savings banks and other organizations but says nothing of mutual insurance, telephone and many other similar undertakings which it would seem should be classed with those enumerated. The provisions for penalties are incongruous; they consist of one set for the new income tax plus the old set for excise taxes clapped on without much thought of adjustment between the two sets. Many Americans abroad have no place of business in the United States, hence no designated collector to whom to report their incomes. Appeals to the commissioner of internal revenue are provided for in case of grievances; local hearings should be provided for also. The provisions regarding fiduciaries should be modified and gifts of annuities, now seemingly exempt, might properly be classed as income. A number of other criticisms have already been considered above.

To summarize, it may be said that the income tax is sound in its fundamental principles and that only such amendments should be made at present as will not add greatly to administrative difficulties. The administrative force should use all of its endeavors to secure accurate and complete returns for those now legally liable

to the tax before adding a vast number of new incomes by lowering the exemption. Meanwhile those with smaller incomes, say down to \$2,000, should be required to make returns (reports) and, in another year or two, the exemption should be lowered. A year or two later differentiation between earned and unearned incomes might be adopted and information-at-the-source given a test as regards certain kinds of income. By that time, or a little later, experience and revenue necessities may indicate desirable changes in the rates of the tax.

That is, there is one class of amendments that should be made in due time, but that time is a little later rather than now. As regards secondary matters involving applications of the law, as for example, what should be included as income, what should be the basis of income exemptions, how should increases in capital value, and other similar matters be treated, the sooner the statute or the rulings are amended properly the better. The same is true of the third class involving textual defects in the statute.

If administration is properly safeguarded and perfected and the tax made as successful as it may be, it is likely to have a great influence upon state and local taxation. It does not seem probable, however, that we shall soon adopt the suggestion to distribute a substantial part of the proceeds among the states, though such a move would probably be wise later if the tax is made as efficient as it may be. One very desirable thing that should not require an amendment is the publishing of detailed statistics of returns. The more accurate these are, the lower the exemptions, and the more differentiations and graduations there are, the more valuable such statistics should be. They should be very useful for the light they would throw upon many problems of modern social legislation, as well as for other economic and political considerations.

The fundamental changes in our economic situation, the ability of our manufacturers to meet foreign competition in the home market and the growing attention to the foreign market, are sure to diminish the relative importance of the protective tariff as a revenue producer, and, in fact, the movement has already begun, though its growth will be gradual rather than sudden. This is certain to bring the income tax into greater prominence. Still further, it is not beyond the pale of possibility that the efficiency propaganda, the prohibition propaganda and other allied and deep-rooted forces are going

to do away with the liquor traffic in the United States sooner than most of us believe. This would do away with the other great source of federal revenues and still further magnify the rôle of the income tax.

In view of our probable needs and of the ability of a good income tax to meet them, perhaps more equitably and adequately than any other important tax which can be used by the federal government, it is extremely important that we lay good foundations and it can not be repeated too often or emphasized too strongly that all considerations of amendments should recognize that efficient administration is the great desideratum.

BRITISH FINANCE AND THE EUROPEAN WAR

BY W. M. J. WILLIAMS,

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To appreciate the effect of the European War, 1914, on the public finance of Great Britain and Ireland it is necessary to look first of all at the provision made for peace time just before the conflagration burst out. That may be seen from the schedule of the Appropriation Act, 1914, passed on the seventh of August, three days after the declaration of war:

TABLE A

	SUMS NOT EXCEEDING	
	Supply grants	Appropriations in aid
Supplementary Votes for 1913-14. (Navy, Army and Civil Services)	£2,792,053	£212,040
1914-15		
Navy	51,550,000	2,023,261
Army	28,845,000	3,668,200
Army (Ordnance Factories)	40,000	3,337,000
	80,435,000	9,028,461
Civil Services		
Class I. Public Works and Buildings.	3,744,769	148,524
Class II. Salaries of Civil Departments.	4,723,433	1,125,698
Class III. Law and Justice.	4,769,234	872,241
Class IV. Education, Science and Art.	20,559,191	28,515
Class V. Foreign and Colonial Services.	1,866,977	123,717
Class VI. Non-effective Services.	1,091,346	7,900
Class VII. Old-age Pensions, Insurance, etc.	22,129,750	248,500
	58,884,640	2,555,095
Revenue Departments		
P. O., Customs and Excise, etc.	30,967,915	961,098
Naval and Military Operations, etc., Vote of Credit.	100,000,000	
Grand Total.	£273,079,608	12,756,694

To this sum must be added £36,636,000, for the Consolidated Fund Services. The sums included in the Appropriation Act table are those for which a vote of Parliament is required annually by way of "supply;" the Consolidated Fund Services are those met by the authority of permanent Acts; and in this case of the £36,636,000, some £23,500,000 are for the service of the annual debt, and £9,885,000 payments in aid of local taxation. The remainder of that sum is made up by grants to members of the Royal Family, the salaries of the speaker and judges, and £1,545,000, to the road board. Already, when Parliament was prorogued for 1914 in August, the House of Commons had voted £309,715,608 for the service of the year, a total which included the £100,000,000 on account of the war, and the £36,636,000 for Consolidated Fund services, and the supply services shown in the above table. The £12,756,694, too, under the head of "Appropriations in Aid," was made up of various sums already in the hands of the various departments, which for some years now they have not been required to repay into the treasury at the end of the year, and then the House of Commons votes the estimates at a *net* figure, *i.e.*, less the appropriations-in-aid, which thus get the sanction of the House. Experience leads us to question whether that is a wise practice. For comparison this sum of the "Appropriations in Aid" must be omitted, but it is important to remember that the departments have that sum at command.

This table from the Appropriation Act, 1914, is instructive, as it affords the latest instance of the manner in which the House of Commons endorses all the various "votes" already passed, and gives them at once legal form with authority to the administration to spend within a limit. In this case that limit included a sum of £100 millions unappropriated, save that it was to carry on war, and to this sum we shall recur later in this paper. To afford a view of current British taxation and expenditure apart from war, there now follows the final balance sheet, as proposed and finally accepted in the House of Commons, from June 23 to August.

As a preliminary to what follows a few brief notes on table B are necessary. Beginning with *expenditure* as determining all else in the national outlay and financial measures, we are struck with the high total of expenditures in peace time; and of course it is well known that expenditures have increased rapidly during recent years. Adopting the year 1905-1906 as a standard of comparison, it was the last year for

TABLE B.—GIVING FINAL BALANCE SHEET, 1914-1915, AS PROPOSED BY THE CHANCELLOR OF THE EXCHEQUER

<i>Estimated Revenue, 1914-1915.</i>		<i>Estimated Expenditure, 1914-15.</i>	
Customs.....	£35,350,000	I. Consolidated Fund Services	
Excise.....	39,650,000	National Debt Services:	
Estate, &c. Duties as in Table V.....	£28,000,000	Interest and Management..... £16,741,000	
Add:—Proposed revision of duties (<i>net</i>)..	770,000	Repayment of Capital. £7,759,000	
	<u>28,770,000</u>	Deduct:—Proposed reduction of Sinking Fund..... 1,000,000	
Stamps.....	9,900,000		<u>6,759,000</u>
Land Tax.....	700,000		23,500,000
House Duty.....	2,000,000	Road Improvement Fund..... 1,545,000	
Income Tax as in Table V. £45,250,000		Payments to Local Taxation Accounts, &c..... 9,885,000	
Add:—Proposed increase of <i>d.</i> in the £ and other alterations (<i>net</i>).....	2,871,000	Other Consolidated Fund Services.. 1,706,000	
	<u>48,121,000</u>	Total Consolidated Fund Services..... £36,636,000	
Super-Tax as in Table V. 3,300,000		II. Supply Services	
Add:—Proposed alteration of scale.....	2,500,000	Army (including Ordnance Factories) 28,885,000	
	<u>5,800,000</u>	Navy..... 51,550,000	
Land Value Duties.....	725,000	Civil Services as in Table IV..... £57,066,000	
Total Receipts from Taxes.....	£171,366,000	Add:—Insurance..... 1,000,000	
		Education..... 586,000	
		Public Health and Local Taxation..... 250,000	
			<u>58,902,000</u>
Postal Service.....	21,750,000	Customs and Excise, and Inland Revenue Departments, as in Table IV..... 4,696,000	
Telegraph Service.....	3,100,000	Add:—Valuation..... 80,000	
Telephone Service.....	6,900,000	Collection of proposed additional duties.... 45,000	
Crown Lands.....	530,000		<u>4,821,000</u>
Receipts from Sues Canal Shares and sundry Loans.....	1,370,000	Post Office Services as in Table IV..... 26,152,000	
Miscellaneous.....	2,130,000	Add:—Proposed increase to low-wage employees..... 75,000	
Total Receipts from Non-Tax Revenue.....	£35,780,000		<u>26,227,000</u>
Total Revenue.....	£207,146,000	Total Supply Services..... £170,385,000	
		Total Expenditure..... £207,021,000	
		Balance..... 125,000	
		<u>£207,146,000</u>	
Borrowings to meet Expenditure chargeable against Capital..... £5,265,000		Expenditure chargeable against Capital..... £5,265,000	
Treasury Chambers } 23 June, 1914 }		<i>E. S. Montagu.</i>	

which the Balfour Government was responsible in part, we find that expenditure chargeable against revenue had risen from £150.4 millions to £197.4 millions in 1913-1914, and table B shows that the estimate for 1914-1915 was no less than £207.14 millions. Roughly we get an increase of expenditure since 1905-1906 of £57 millions a year. The total spent on the Consolidated Fund services was less by over £4 millions. That is accounted for principally by the reduction of the sum appropriated to the service of the national debt from £28 to £23½ millions; but on the other hand a grant of £1,394 millions toward the road improvement fund appears as a new charge, according to the budget of 1909-1910; and other changes of a minor character result in this section of the expenditure being less by that £4 millions. On the other heads increase is the order throughout. The cost of the army is slightly higher than that for 1905-1906, though that was much smaller in 1908-1909, and has gone up since. The navy was at £33.3 millions in 1905-1906, but was as low as £31.1 in 1907-1908; it was now placed at £51.55 millions before the war. The civil services were at £28.4 millions in 1905-1906; they are now put at £58.9 millions; but in this case "civil services" must be understood as civil purposes, covering the cost of the civil departments (other than the revenue) as well as grants-in-aid of civil objects. It will suffice to show that the cost of education went up in this interval from £16.396 millions to about £20.2 millions, and meantime new social services have been created, such as old-age pensions, labor exchanges, national insurance, etc. (health and unemployment), to which about £21 millions are now appropriated. In the "revenue" departments the post office takes the leading place, and the cost of working it has grown from £15,978 millions to £26,227 millions; but the postal services always pay their way and add a considerable free sum to the funds at the treasury. This brief summary reveals the direction in which the increased expenditure had been incurred. In the United Kingdom there is much unanimity until the means of meeting expenditure come to be considered. On the whole, though there was much party play, there was not much earnest opposition to the "social welfare" program which has added £21 millions already to annual expenditure, there was no such opposition as that to the growth of the cost of the army and the navy from £52 to £75 millions (principally on the navy) during these nine years—which arises from an unbridgeable difference in ideals apparently. This last fact should

be kept in view when we come to consider the war, and the attitude of the people toward it.

On the *revenue* side we see (table B) that of the total of £207,146 millions, only £171,366 millions were expected from taxes, the rest being drawn from postal and miscellaneous sources. The sum corresponding to the £171,366 millions from taxes was £129,776 millions in 1905-1906, disclosing a growth in revenue from taxes of £41.59 millions. If from table B we adopt the customs and excise as representing the indirect sources of revenue, while the direct sources are represented by the death duties, income-tax, stamps, etc., a very rough division, no doubt, but serviceable, we get a very instructive view of the trend of affairs during the past nine years in question, involving facts, too, which have a very important bearing upon the financing of war costs. So regarded the revenue from taxes in 1905-1906 was drawn, 54.13 per cent from indirect and 45.87 per cent from direct sources, and the revenue for 1914-1915 was planned to yield 43.75 per cent from indirect and 56.25 per cent from direct taxation. As regards these two classes of revenue sources, therefore, there has been a "right about face." This is an aspect of British public finance of immense internal importance, which has attracted attention far beyond the confines of the British Empire. Here is fought perennially the battle, not so much about the question of expenditure, but who shall bear the burden of the demands made upon the Kingdom. It will be recollected that in December, 1905, when the Balfour Government resigned, the United Kingdom was discussing the old question of a general tariff, principally on imports from other countries. The resolution in our public finance witnessed in the period 1905-1906 to 1914-1915 (and it was quite that), by which a rapidly growing expenditure was made a concomitant of a departure in taxation which sought all the money required for reforms and increased outlay from direct sources, in other words from accumulated property. That, therefore, was a direct rejection in practice of the principles of those who adopted from Mr. Chamberlain the return to a revenue based upon the taxation of imports. Equally plain it is that this fact of a departure in taxation to meet new expenditure is of first rate importance at the present critical moment.

To enter minutely into the means by which that increase of £41.59 millions in a total revenue of £171,366 millions was produced during the past nine years is quite impossible here; but some reference

to the steps taken is desirable for several reasons. The returns for postal revenue (including telegraphs and telephones), and of the incomes returned for examination by the inland revenue authorities, will suggest the source of the success, and also the justification of the means. Reference again to table B will remind us that £31.75 millions are estimated to come from the three postal services in 1914–1915, whereas only £21 millions came from those sources in 1905–1906. The gross amount of income received by the authorities in 1905–1906 was £925 millions; the amount became £1,111 millions in 1912–1913, and was larger, unquestionably, the following year. The figures respecting the death duties confirm these indications of growing financial strength, and, moreover, point to the obvious fact of the great accumulation of wealth in a small section of the population. These facts became the basis of the transference of burdens from indirect to direct taxation, and the success of the enterprise, the receipt of revenue covering the largely increased expenditure, and affording means to pay off some £100 millions of debt also, became a justification. The theoretical and practical objections to imposing taxes on commodities were alleged also, but at the same time Mr. Asquith and Mr. Lloyd George, who have been Chancellors of the Exchequer during the interval, have declined to be parties to abolishing the few remaining taxes on necessaries, such as tea and sugar. The taxes which were imposed, on the other hand, have been significant.

The changes in taxation were such that the relief to the taxpayer may be passed with a mere reference; but the increase of expenditure was met necessarily by increases in taxation. On the indirect side (that was in 1909–1910) there was a complete reconstruction of the license duties and of the duties on spirits, beer and tobacco, making the spirit duty £14 9s a gallon, the beer duty 8s 3d a barrel, and tobacco duty 3s 8d a pound. On the direct side, however, during 1905–1906, 1914–1915, the death duties have been reformed more severely three times from 1908 until now, making the graduation on the total of estates, as well as on specific legacies, much more severe. The income tax, too, has been raised in two ways, *viz.*, by means of the poundage, which is now at 1s 2d, and by a super-tax on incomes above £2,500, with many devices attending these changes leaving both the main and the super-tax now in a highly graduated, but still in a very patchy and unsatisfactory state. Stamps, too, were made more severe in some cases; but the land value duties—increment, reversion

and unimproved land, with a mineral rights duty also—must be mentioned, but these land duties are now regarded as disappointing in yield, except the mineral rights duty, perhaps, and were fought so fiercely in 1909–1910 and later chiefly on account of the valuation of land which was provided for at the same time, though that was by no means an integral portion of the land duties. The valuation of land, now due for completion sometime during 1915, is feared really because of the great possibilities it may afford an ingenious and reforming Chancellor of the Exchequer. I have paid some attention to the result of these valiantly fought changes in British taxation during the interval in question here, and though they are substantial, in some respects even severe, yet, if equality of sacrifice be aimed at in contribution to the public expenditure, the result errs still in too great a burden placed upon the weaker and poorer citizen. The taxing of some millions of citizens must be a rough process at all times, and hard cases will occur, but the grumbling when directed at our reformed taxes is aimed at the wrong point. The mischief lies not in our taxation, which has an incidence yet making the burden in inverse ratio to the means of the taxpayer, but in our expenditure. Turn to our table II again, and we find an expenditure on the army and navy, together with the £23½ millions for the debt (almost wholly a war debt), of nearly £104 millions a year in peace time. Such a tremendous expenditure on unproductive services must be burdensome, and he who wills the policy must will the taxes, the reasonable and fair taxes to pay for it. It is impossible in this place to demonstrate that recent changes in taxation have been reasonable and fair, but it can be done, and with comparative ease.

The outbreak of war on the fourth of August, 1914, found the United Kingdom of Great Britain and Ireland still in a period of much financial prosperity. The trade of the Kingdom was not quite so elastic and prosperous as that of 1912 and 1913, but yet was at a volume and value which, compared with those of a dozen years earlier, had become the nightmare of those who would load it with a tariff burden, but was the joy of all who candidly reviewed its conquests and health. If we omit the trade in foreign and colonial goods which reached £109 millions in 1913, our over-sea trade in 1905 was £487 millions of imports and £329 millions of exports. These figures for 1913 had become: imports £659 millions, exports £525 millions. They are better understood, and afford a better test,

if we say that in 1905 imports were £11, 6s, 9d and exports £7, 13s, 6d per head of the population, but in 1913 £14, 6s, 5d, and £11, 8s, 3d, respectively. So that relatively and absolutely a great increase had been secured in British over-sea trade. Again in addition to paying for all the new social services, and for the greatly expanded navy, and for the total growth of expenditure out of current revenue, it can be shown that since 1905 the national debt had been reduced from £755 millions to £649 millions—a reduction by £106 millions to March, 1914. That brought the debt to within £21 millions of what it was at the opening of the South African war. A period of great material prosperity had been experienced in the United Kingdom since 1905; and it was into this scene of prosperity that war, with its horrors and waste, burst in August last. It is evident that the Kingdom was strong financially, but it must be observed also that at the moment Britain's ordinary engagements were at a high figure, and they involved a high rate of taxation to meet the expenditure. On the other hand, it must be admitted that with a navy at £51½ millions a year and more, peace was maintained at a war cost.

As we face the cost of war it must be recollected that even a military success is a financial defect; war devours, war destroys. Not only thousands of the best men who produced the wealth indicated by figures quoted already will be slain, or maimed, by war, but war destroys that wealth at a rate far beyond that of creation. How then shall prosperous Britain meet the cost of this war? How shall our rulers proceed "to foot the bill"?

In table A there is an item—"naval and military expenditure, £100 millions." That, so far (November 7), is the only power to spend on the war which the British government has taken. By that power it has been possible to raise a considerable sum of money, additional to non-war requirements, merely on a "vote of credit," without recourse to ultimate methods of meeting the cost. On that basis according to official statements treasury bills for £80 millions had been issued up to October 31, and altogether bills of that nature to a total of £86 millions were current at that date. That is by no means all that the British government has attempted of a financial nature since the war came upon them. There is the insurance of war risks for shipping; the purchase of a large stock of sugar, fixing the retail price; the declaration of a moratorium to the first week in November; the organization of relief; and several other things, in-

cluding the guaranteeing of sixty per cent of the sums advanced by banks on bills of exchange, and the issue of one pound and ten shilling treasury notes to save the stock of gold; but all these things, intimately connected with the cost of the war, were not measures to meet the direct cost of that war. As this paper is written, just before the House of Commons reassembles, and even before the Prime Minister's speech at the Guildhall, at Lord Mayor's banquet, on the ninth of November, we are necessarily without a hint of the specific proposals on the subject which the government will make. It is a question, indeed, whether the government will table proposals to meet the cost of the war before the new year, or whether it will ask for more power to raise money temporarily; and, looking to the advantage of maintaining the great unanimity of the country for the conduct of the war, there is much to be said for the latter course.

The cost of the war, and how it is to be met is an unavoidable subject nevertheless. When Parliament is sitting we shall hear much of it whether the government will table its proposals or not. The postponement of an unpleasant subject does not solve it, and in this case it is evident that the financing of the war involves the maintenance of commercial health, and should not be postponed long. Mean-time pens are busy sketching the position created by the war, and that is likely to be the case until the government's proposals are disclosed. The fact that it is known that the treasury has been consulting at home and in America on kindred matters adds to the keen anticipation of the war budget.

In this position, however, it is open to us to regard the problem to be solved with a clearer atmosphere perhaps than when controversy may be keen regarding special points. First of all there are indications all around that all classes are impressed by a necessity to make sacrifices; the very horrors of war are brought on to many hearths, and there is a very strong consensus of opinion that the fighting is for a just cause; and that, compared, say, with the state of things at the time of the South African War, is a great advantage financially. That, too, helps in the decision first to be made about the provisions required. If the war is of general importance, in the sense that it is fought not for a day, but is crucial to the people and to the country, then the present generation of citizens alone should not be required to shoulder the cost. Such a decision is now watched closely in the United Kingdom. To make it easy to go to war is not

the desire of any responsible citizen. Turkey can afford to go to war every decade, but Turkey is also decadent, while Britain has but recently, as I have shown, made successful efforts to pay the cost of the South African War. In short, a resort to loans only on special and extraordinary occasions has become in Britain almost a guiding principle of our public finance. The immense fleet, now doing such service on the oceans, this year requiring £51½ millions, apart from war, has been paid for on the principle of "pay as we go." The advantage of that is palpable now that war has overtaken us. It will be granted that the present European War is a special and extraordinary occasion. Undertaken for our own interests indirectly but directly for the protection of Belgium and the fulfilment of obligations entered into more than two generations ago, it is obvious that objects beyond those of today are involved, the place, position and prosperity of the country may be involved now and in days to come. It is not likely, therefore, that there will be any difference of opinion that loans should be resorted to for the cost of this war.

But several questions arise at once. Shall this cost be met by loans alone? Or shall a part be met by loan, and a part by taxation? If in part both ways, what proportion by loan, and what by increased taxation? Again what kind of taxation shall be adopted for this purpose? Here unanimity will, probably, fail; but the question will not brook delay; drifting may be as dangerous as a sea mine.

We are met at once by the indefinite sum which may be incurred. Personally I am among those who look for the earlier rather than a later close of the war. It is not probable, even amid the grim resolves of nations, that the blockade of Germany, with its cumulative trials in commerce, and shortness of food, and the dire slaughter of men in tens of thousands, accompanied by a corresponding destruction of wealth, can be sustained long nor permitted to block the return of common sense, and of humanity. Passion consumes itself, and hunger will swallow patriotism. Ambition has ever led to a fall. But at best it is uncertain how long the war will last, and still more uncertain how much it will cost. As for Britain I have shown that at the time of writing the £100 millions of "credit" had been spent almost, and the government will be sure to ask for another £100 millions soon after the House meets on the eleventh of November; but how much more will be required for this work of slaughter! I have shown already that it is advisable to resort both to loans and to taxa-

tion; the former because of the indefinite liability as well as for prudence, the latter for similar reasons, but especially to connect passion with a clear responsibility for action. Still, is it not clear that the indefinite side of the cost must be subject to treatment by loans, and that the most immediate decision will be the amount to be raised by taxes?

The last issue of treasury bills for war purposes, that on November 4, was taken up readily, the market was strong, and the rate was $3\frac{3}{8}$ per cent. That brings the issues already made up to £95 millions or more. When the government may proceed to fund these bills, to turn bills into loans, is of less consequence for present purposes; but it is of much importance to note that confidence is strong and unshakable, so that it may be said with assurance that any war loan issued will be taken up with readiness, and probably at about $3\frac{1}{2}$ per cent, on an average. Our consolidated debt is nominally a $2\frac{1}{2}$ investment; but has been kept at about $68\frac{1}{2}$ during the close of the stock exchange since the beginning of August, which is equal to a yield of about £3, 13s, 0d per cent. The confidence shown in the bank of England, and the ready acceptance of the treasury war bills, have been the result, in part at all events, of a management of public finance on principles suggested already, the paying of current expenditure as we go, the reluctance to trade and to act beyond our means, by resorts to loans. Of course, the great recent prosperity in commercial matters is a very important factor in the confidence which is felt. There will not be any difficulty in raising loans. Rather will it be necessary to be firm in requiring a portion of the cost of the war from those who wage it—by taxation.

Differences of opinion, even among those who agree on financing methods, are easily conceivable when the amount to be raised by taxes is in question. We have seen that the British government has spent £100 millions in three months on war, and probably much more. How much might be necessary for a year? Shall we say £500 millions? It has been computed that Germany and Russia are spending quite £4 millions daily, France not less than £3 millions, and Great Britain, say, £14 millions! Then there are Austria and Hungary, Servia, and Belgium, and now the impecunious Turk insists on entering upon the gamble of war. No fixed proportion of the cost can, therefore, be required from present taxpayers, and consequently we are reduced to the necessity of deciding upon some sum—in

Britain's case, say, £30 millions. If we assume that the war will cost Great Britain at least £650 millions (and that according to some is a very low estimate) that sum, at an average of $£3\frac{1}{2}$ per cent will require about £23 millions a year to meet interest, and £7 millions should go toward the sinking fund. Looking toward our needs internally, and though our annual expenditure is at a very high figure, apart from war, yet I do not think that less than £30 millions should be raised by means of war taxes annually. The rest of the cost need be funded in some form, but at present it would not be of much service to discuss what the form of the public securities created should be. Considering the financial confidence and the possibility that the war will come to an early end, it is probable that Britain will secure the money required at an average of $3\frac{1}{2}$ per cent. But now of the way to raise the sum required by taxation!

The account given in this paper of Britain's present financial position, and particularly of recent movements in taxation, with their results, will have prepared the reader for the suggestion to be made on the subject of war taxes. I say war taxes, for it would seem to be necessary, at least for some years, to maintain the taxation for the cost of this war in a separate section of the public accounts. However good the cause, and triumphant the issue, enthusiasm is evanescent, and paying taxes for a just war is a passion rather than a dictate of love. Later on, no doubt, it will be necessary to unite the annual burden in one charge; but experience shows that many will bear the brunt of hailing an enemy and even of fighting him, but paying the bill is *caviare* to the natural man.

If the principles on which the budgets of 1909 and 1910, and later years, have been justified by experience, as they were accepted as just, then the star to guide a Chancellor of the Exchequer in financing this war is in the sky already. Not much should be got from taxes on commodities, and from taxes on necessaries like tea, sugar, and dried fruits, none at all. The only commodities from which some revenue might be got, *viz.*, beer, and spirits, and tobacco, are taxed severely already. Beer in 1913 contributed £13.2 millions, spirits £22.6 and excise licenses £5.5, or a contribution of £41.3 millions from drinks. To this we may add £17.2 millions from tobacco. Nearly £60 millions from these common luxuries, with some £13 millions more from articles of consumption, makes the sum thus raised from forty-six millions of people, mostly poor, a heavy sum, without

adding the weight of the general argument against this form of taxation. Look to table B, and to other sources of revenue beside customs and excise, and it will be seen that death duties and income tax will be called upon to produce the special war revenue required. To invent taxes, acceptable and just taxes, is one of the statesman's greatest difficulties: and as death duties and an income tax are effective, and also just in principle, why should we multiply the forms in which the same man shall be taxed? Death duties are levied when a new possessor comes into acknowledged wealth. An income tax levied carefully draws on a realized income; it is not a stroke in the dark, as a duty, say, on a cup of coffee is, for the incidence of the tax is really unknown. If, as is estimated in 1914, an income tax, with the super-tax, will produce about £54 millions, an extra 7s in £ for war, making 1s 10d in the £ in all, will produce £25 millions more. The remaining £5 millions might be got from realized wealth by a further screw of the death duty, a tax which is yielding well, and justifies itself in several ways. Let me say that I anticipate a strong objection to these suggestions from well known and tried individuals and parties, but am equally sure that they are well founded in principle, and proposed with a single eye to the justice of the matter.

But I want to repeat another suggestion, which will also serve to turn the edge of the objection to such measures. In imposing a special addition to the income tax, opportunity should be taken to improve the assessment and collection, by collecting directly from the taxpayer after a declaration of income, and after a *direct* graduation of the tax from the lowest point upwards, instead of the present cumbrous way of securing a graduation. Of this improvement I am not hopeful at this moment, as the treasury will plead the magnitude of other more pressing tasks. That in addition opportunity should be taken to reduce the amount when an income tax becomes chargeable. It is now £160 and upwards. As it is not wise nor advisable, nor just, to add to the indirect taxes, and even advisable to do away with taxes on articles of food consumption, we should reduce the sum assessable to income tax to a £100 at least, and ultimately to £80. That would enable everybody, except the very poor, to pay according to income, and avoid the common and effective grumble from a millionaire, that some were escaping all taxes. Of course, if it were resolved after all, to mulct users of strong drinks and tobacco in some amount of the war cost, the sums to be

drawn from death duties and income tax would be reduced in proportion.

Is it not obvious that a war budget on these lines would require courage and firmness in the proposer? Experience tells us that they would be necessary, very decidedly; but the present government has not lacked such courage, and on this matter it can appeal to the courage and patriotism which sustained the war. Again, if Pitt, and those of his day, could finance the Napoleonic wars until stock was issued at £46 at least, surely the resources of Britain are such now that it can bear a 1s 9d or 1s 10d income tax for a time! We have not yet resisted, even to a denial of luxuries.

On November 17, Mr. Lloyd George, as Chancellor of the Exchequer, introduced a special war budget into the House of Commons. The following are the governing figures, in brief, of his statement; but the foundation figures of his earlier budget will be found slightly altered. Deducting a loss of £11,350,000 on the prospective revenue to the end of March next, caused by the war, he estimates now that that revenue will reach £195,796,000. The expenditure with a slight deduction, will be £206,924,000, but to March, the war expenditure is estimated to reach £328,443,000, thus making a total expenditure for this financial year of £535,367,000—and so showing a deficiency of £339,571,000. Two cautions in reading these figures: (1) the sums for the cost of the war throughout are in addition to the expenditure sanctioned in the ordinary budget of May and June last; and (2) the large sums now estimated for the war are only from August last to the end of March. The estimate for the war for a year is £450 millions; but even that is only an estimate. (At this point the Chancellor expresses a hope that at the end of the war there would be "a reduction of armaments." On war, no doubt, but let the psychologist turn prophet and say whether that will be realized on ordinary expenditure.)

The Chancellor of the Exchequer, as anticipated, announced that this situation will be met, in part by added taxation, and in part by a loan amounting to £350 millions, which was very largely subscribed in three days. The *added* taxation proposed (and evidently to be adopted) is *income tax* (and *super-tax* on incomes over £2,500) to be *doubled*, i.e., on earned 1s 6d, and on unearned incomes 2s 6d in the £; but for the four months from December 1 to March 31 only *one-third* will be charged. (Within

these limits there will be much graduation.) In a full year this is estimated to add to revenue (£38 $\frac{3}{4}$ income and £6 millions super-tax), £44,750,000. Next, failing a better charge on wages and small incomes, too *indirect* additions, *viz.*, 17s 3d more on each barrel (36 gallons) of *beer*, making 25s in all, to enable a beer-seller to charge one halfpenny more for every half pint, and so leave a little profit *also*. (This is much opposed by the beer trade.) That, after a small allowance on licenses, on account of shorter hours of sale, will produce £17,050,000. Then tea is charged 3s per pound more, making 8s, which it is hoped will bring in an additional £3,200,000. These measures will bring in £15 millions extra to March next, and £65 millions more in a whole year.

The loan for £350 millions issued on November 18 was at 95 per cent, carrying interest at 3 $\frac{1}{2}$ per cent, redeemable at par in 1925 or 1928, at the option of the treasury. It is thus equal to a trifle over 4 per cent. Firm offers for more than £100 millions had been received before it was issued, and afterwards there was no doubt of a great success, as applications poured in for £100 or multiples of that amount. The only note on the government's proposals possible or desirable here is that though paying up is unpleasant, and there is evidence of difference of opinion on taxation, such is the united and conciliatory spirit of Parliament and the country in face of the war, that the war budget will be passed in a few days, much as it is. But of course, on the whole financial situation much will be said as the war develops, and as the financial year comes to a close with March.

THE RELATION BETWEEN FEDERAL AND STATE TAXATION

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In the past the United States for the most part has collected its revenues from duties on imports, but at periods of unusual need has levied taxes on land, occupations, incomes, deeds and other contracts, and many other subjects. Since the Civil War taxes have also been levied on certain manufactures. The national revenue in the fiscal year 1913 aggregated \$724,111,230, exclusive of postal receipts. Of this sum, \$318,891,396 came from customs and \$344,416,966 from "internal revenue," which is, of course, chiefly from the manufacture and consumption of whisky, beer and tobacco. In the year 1914 a third important source of revenue has been added, namely, the income tax. The states, in their turn, are practically free to tax the persons and property within their borders in any way they may see fit.

In the past the federal government and the states have selected their fields of taxation from the standpoint of opportunity and expediency, rather than according to the methods of logic or the principles of finance. If we may judge the future by the past, each jurisdiction will likely continue, for sometime, to use that field of taxation which best suits its convenience. For that reason I deem it wholly unwise and unnecessary to map out any so-called "proper field" of taxation either for the federal government or for the state governments. In other words, the scope of this paper must be the practical problem of the relation of federal and state taxation, rather than the theoretical problem of the proper field for each jurisdiction. Omitting this purely academic discussion, we still have left the serious problems of assessment and collection—surely a field big enough to engage all our energies. I believe if the problem is examined in this practical way, the investigation will finally lead to coöperation among the present overlapping and conflicting jurisdictions, and ultimately will give us a solution of the problem of the "proper field."

1. Taxation An Interstate Question

Let us consider briefly the situation that now confronts us. More and more the property and the business in a state are becoming interstate in nature. For purposes of illustration, take a few concrete cases. In Chicago there are certain great mail order houses whose sales run up into the millions, probably hundreds of millions of dollars a year. These houses do business in every state in the Union and in foreign countries as well. In reality this gigantic business is interstate. But in actual practice, under our uncoördinated systems of state and federal taxation, this business is assessable only at its domicile in the state of Illinois.

The International Harvester Company, to illustrate further, sells farm machinery not only in the United States but throughout the world. It is incorporated in one state, has factories in four or five other states, has warehouses in many more states, and does business in yet other states of the Union. Hence this great corporation, which is a business unit, is subject to taxation by many competing jurisdictions, not as a business unit, but as so many pieces of tangible property in the competing states. Some states may assess it too high; some too low; others not at all; but in any event there is small likelihood that justice will be done either to the corporation or to the states themselves. This is clearly not a state problem, but a problem concerning a group of states. Yet the states involved do not coöperate in meeting the situation. The same difficult condition obtains in regard to all the great industrial corporations—oil, steel, tobacco, sugar, etc.

If we turn to another field of state taxation—the inheritance tax—we find a great need, and a great lack, of interstate comity. For instance, Mr. A, a resident of Minnesota, dies. His will provides that his property consisting of North Dakota farm mortgages shall pass to a legatee living in Wisconsin. Will this estate be taxed once, twice, or three times? Three times. To quote the department of commerce's *Special Report on Taxation* (December, 1913, p. 9):

The present method of taxing inheritances in Wisconsin, as in all other states except New York and Massachusetts, namely, subjecting the same property to taxation twice or perhaps three times in as many states is unjust, and there is probably no greater need among the states for uniformity of tax laws than in the taxation of inheritances.

This situation is not merely bad; it is steadily growing worse.

The great field which we technically know as "interstate commerce" I have not mentioned at all. The problem of taxing the railroad has never been solved and never can be solved by any one state acting alone. There are two questions involved here, namely: (1) What is the value of the road? (2) What share of this value is assignable to the state in question? The Pennsylvania road recently built a few miles of road in the state of New York, including one of the finest and most costly terminal stations in the world. The cost of this small section of road was great enough to pay for the construction and equipment of a first class road from New York to San Francisco. But where shall this terminal be assessed? Shall its value be assigned to New York or to all the states reached by the Pennsylvania system? No state has arrived at precision in determining the value of a railroad. Space is lacking to show the various methods used and various results obtained in assessing the same railroad by adjoining states. No state can make an assignment of railroad values to other states, even though it had a proper method of assigning these shares, and even though it had worked out precision in assessment. The thought must occur to every reader at this point that the federal government has now, in the interstate commerce commission, a body adequately equipped to value all railroads with scientific precision, and fully able to assign such values to the individual states. It has taken us ninety years of experimentation in railroad matters to work out this piece of government machinery. Now that we have it, why not use it to its full efficiency?

What is said of railroads applies in the main to such businesses as the telegraph, telephone and express companies; dining and sleeping car companies; private car lines; light, heat, and power companies operating across state lines; and interstate trolley lines.

A National Conference on Taxation was held in Buffalo in 1901, under the auspices of the National Civic Federation, and at this conference the following resolution was unanimously adopted:

WHEREAS, modern industry has overstepped the bounds of any one state and commercial interests are no longer confined to merely local interests; and

WHEREAS, the problem of taxation cannot be solved without considering the mutual relations of contiguous states, be it

Resolved, that this conference recommend to the states the recognition and enforcement of the principles of interstate comity in taxation. These principles require that the same property should not be taxed at the same time

by two state jurisdictions, and to this end that if the title deeds or other paper evidences of the ownership of property, or of any interest in property, are taxed, they shall be taxed at the situs of the property, and not elsewhere. These principles should also be applied to any tax upon the transfer of property in expectation of death, or by will, or under the law regulating the distribution of property in case of intestacy.

Since this resolution was adopted there has been no increase in comity among the states. But there has been an enormous growth in conflicting legislation.

A council of states has been suggested as a proper body to deal with the complex problems just cited. But no such council has yet been formed or is likely soon to be formed. A National Tax Association, devoted to the study of state and local taxation, was formed at Columbus, Ohio, in 1906. A significant step was taken by this latter association at its 1913 meeting, when it was decided to enlarge the scope of the activities of the association to include a study of federal taxation. And at the 1914 meeting of this association in Denver, a large part of the discussion was devoted to the relation between federal and state taxation. It is evident from the foregoing, therefore, that while no solution has been as yet reached, the problem is at last being formulated, and being formulated moreover in its total aspect, as an interstate as well as a local and a national problem.

The formulation of the problem has suggested a few steps towards its solution. It has turned our faces in the direction of coöperation in the place of the present crassly competitive, individualistic method.

2. The Need—Coöperation

The steady increase in federal and state expenditures—outstripping our increase in both wealth and population—makes it high time to seek out some remedy for the growing defects in our tax systems.

The difficulties and failures in our state methods and the useless duplication and waste in both federal and state methods suggests coöperation between state and nation as the next step. The suggestion has already been made that in assessment of interstate commerce corporations the federal government could wisely coöperate with the separate states. Such a step could be taken without involving any constitutional amendments.

The federal government has now added the income tax to its fiscal system. This tax is in all probability to be a permanent feature of our financial system. And the states will, with the further example of Wisconsin's success with a state income tax before their eyes, soon look to this form of tax as offering a practicable remedy for the evils of the personal property tax. The commissioner of internal revenue has all the administrative machinery necessary for determining the size of the individual taxpayer's income. Why should this costly machinery be duplicated? Already the states' tax commissions, boards of equalization, and other administrative machinery are high in cost, and low in efficiency. More simplification and less duplication are needed. And this means more coöperation.

Interstate industrial corporations cannot be justly assessed by the separate states. They can be so assessed by the federal government. Indeed the new federal trades commission will likely perform this very function. Such valuations should be certified to the tax officials of the various states, not merely for purposes of checking up the work of these officials, but for final assessment purposes.

Thus far we have been treading on ground where there is not room for very great differences of opinion. However, if we proceed further with the idea of coöperation we are at once on debatable ground. Should the federal government, for instance, assume the task of assessing personal property, especially those forms of personalty which by their intangibility and mobility defy state laws? Should the federal government assume the duty of assessing all business corporations, thus with one fell stroke cutting the Gordian knot of assessing justly that artificial "person" consisting in part of tangible property, in part of intangible securities? Should the federal government even go so far as to collect the tax in any or all the foregoing cases? Conceivably the tax could be collected in this manner and be distributed to the states on some pre-determined basis.

3. Dangers Real and Fancied

I am sure the critic will interpose some objections at this point. The staunch New Englander will say: "We believe in local self-government. We manage our own affairs. And we resent any outside interference with our cherished historical institutions."

While this sentiment must be respected, yet the real issue is not to be shirked. What is the best tax system? That is the real question. Is our present individualistic, helter skelter system as good as the proposed coöperative system? Local self-government has gone to seed in many places, not omitting New England. The federal government already has prescribed rules for taxing national banks. The states follow these rules. In like manner the federal government could wisely establish rules for, or do the actual work of assessing incomes, interstate commerce, and other forms of business enterprise. In this matter we should be governed by the wider questions of cost and efficiency, rather than by any doctrinaire principles of states' rights. The danger lies on the side of too much decentralization of the assessing power. The *taxing power*—the vital thing—will in any event remain exactly where it is now. Hence the cry to "save the local assessor" is a belated cry. It is an *administrative* reform we seek, not a legislative reform.

4. *Future Development*

The ideal method of assessing property would have a minimum of arbitrary procedure. Exact mathematical formulas in determining values are desirable but unattainable. But progress must be towards the use of rules which are simple and applicable, and machinery which combines simplicity with low cost and high efficiency. This means no duplication and much coöperation. This means precision and publicity.

Coöperation in assessment and collection of taxes, as outlined in the preceding pages, will lead to a division of the field of taxation, a division based on administrative experience, not on preconceived theory. It will also lead, it is hoped, to a business-like coördination of the federal administrative machinery itself, which is now represented by the following organs and functions: the interstate commerce commission which is now gathering and publishing facts regarding the values of our greater public utilities; the bureau of the census in the department of manufactures; the bureau of statistics in the department of agriculture which collects and publishes statistics concerning crop values; the treasury department which determines the size of incomes and administers the federal income tax.

THE WISCONSIN INCOME TAX

BY KOSSUTH KENT KENNAN, LL.D.,

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Prior to 1912, the history of state income taxes in this country failed to disclose a single instance in which the tax had been successful as a revenue producer or had justified itself as a practical or desirable method of taxation. No one can peruse Dr. Kinsman's excellent monograph on the *Income Tax in American Commonwealths* without being struck by the uniformly meagre and unsatisfactory results obtained. Of all the states Virginia has probably had the largest experience with income taxes, yet the amount raised annually in that state for the past twenty years will average far below \$100,000. This, too, in spite of the fact that the state has taxed incomes for nearly three-quarters of a century and that during that period nearly every known form of income taxation has been tried.

In the face of these experiences it is somewhat remarkable that the people of Wisconsin should suddenly—and apparently spontaneously—reach the conclusion that a state income tax was necessary and desirable.

History. In 1903 a joint resolution to amend the constitution so as to authorize the levy of an income tax was introduced in the legislature and was passed in both houses with but one dissenting vote. Both political parties favored the amendment in their platforms, but there was no discussion of the subject and it seemed to be taken for granted by the politicians that the theory of income taxation was one of those things which could be safely advocated without any danger of its ever going into actual operation. The first amendment proved abortive owing to a technical defect in the required notice of election. In 1905 the resolution was again introduced and passed with but little debate, the proposed amendment being as follows:

"Taxes may also be imposed on incomes, privileges and occupations, which taxes may be graduated and progressive and reasonable exemptions may be provided."

When the amendment came up for legislative ratification in 1907 there was only one vote against it and, when put to the test of popular vote in 1908, it was carried by the decisive majority of 85,696 to 37,729.

A first draft of a state income tax law was introduced at the legislative session of 1909. A "recess committee" of three senators and four assemblymen was appointed to investigate the subject and report in two years to the next session. This committee held public meetings in all the larger cities of the state and invited discussion, suggestions and criticism from all possible sources. When the bill reached the legislature in 1911, the first real opposition to the measure made itself felt. Upwards of sixty amendments were proposed,—many of them of such an absurd character as to indicate that they were made solely to defeat the law. Toward the end of the session the need of expert assistance was felt and Dr. Kinsman was engaged to redraft the bill while the members of the tax commission rendered valuable assistance.

The Wisconsin income tax law was passed in June of the year 1911 and by its terms was made to apply to all income earned in that year. In the suit which was immediately brought in the state supreme court to test the constitutionality of the law, a great many points were raised against the validity of the act, and the case was argued by lawyers of learning and ability. The court, in its opinion sustaining the law, said:

By this Act the legislature has, in substance, declared that the state's system of taxation shall be changed from a system of uniform taxation of property (which so far as personal property is concerned has proven a failure) to a system which shall be a combination of two ideas, namely, taxation of persons progressively, according to ability to pay, and taxation of real property uniformly, according to value.

The Wisconsin income tax act is quite lengthy and only a few of its more salient features can be mentioned.

Income. The law begins with the usual futile attempt to define income. For example, it provides that the term "income" shall include rent, interest, wages, dividends, profits and royalties "and all other income (!) of any kind derived from any source whatever except as hereinafter exempted."

The inclusion under the head of income of "the estimated rental of residence property occupied by the owner thereof" has been the cause of much complaint. There seems to be a considerable class

of people whose mental processes are not quite equal to the task of understanding this requirement.

Deductions. The usual deductions for business expenses, losses, dividends, interest paid on indebtedness, interest from exempt bonds, salaries of federal officials, and pensions are allowed. Amounts paid for taxes may also be deducted but only such as are paid upon the property which produced the income. In other words the taxes paid on unproductive property cannot be deducted from gross income. Moneys received from life insurance by persons legally dependent on the deceased are exempt up to \$10,000.

Exemptions. The exemptions consist of: \$800 for a single person; \$1,200 for husband and wife; \$200 for each child under eighteen years of age; \$200 for each dependent.

These exemptions apply only to individuals who are residents of the state. Non-residents and corporations are required to pay the tax on their whole net income arising from sources within the state.

Rates. The scale of rates for individuals is progressive from one to six per cent, the latter figure being the maximum. While the increase in percentage of rate is accelerated with the progression, the basis of taxable income to which the rate applies advances uniformly by steps of \$1,000. This may be illustrated by the following table:

	TAXABLE INCOME	RATE, PER CENT	TAX	TOTAL TAX	TRUE RATE ON WHOLE AMOUNT, PER CENT
1st.....	\$1,000	1	\$10.00	\$10.00	1.0
2nd.....	1,000	1½	12.50	22.50	1.125
3rd.....	1,000	1¾	15.00	37.50	1.25
4th.....	1,000	1¾	17.50	55.00	1.375
5th.....	1,000	2	20.00	75.00	1.5
6th.....	1,000	2½	25.00	100.00	1.6667
7th.....	1,000	3	30.00	130.00	1.8571
8th.....	1,000	3½	35.00	165.00	2.0625
9th.....	1,000	4	40.00	205.00	2.2778
10th.....	1,000	4½	45.00	250.00	2.5
11th.....	1,000	5	50.00	300.00	2.7273
12th.....	1,000	5½	55.00	355.00	2.9582
13th.....	1,000	6	60.00	415.00	3.1923
15th.....	1,000	6	60.00	535.00	3.5667
20th.....	1,000	6	60.00	835.00	4.175

These rates are not as high as they may seem at first glance. For example, although the rate prescribed for the twelfth thousand is $5\frac{1}{2}$ per cent, the amount of tax to be paid on \$12,000 would be \$355, or 2.9582 per cent of that sum. The point at which the maximum rate is reached corresponds closely with that at which it is attained in a number of foreign countries. For example, the average amount of taxable income at which the maximum rate is reached in Prussia, Saxony, Norway, Sweden, Denmark, England and six of her colonial possessions is \$14,390.

The rates for corporations are, at the beginning, practically double those for individuals and the maximum rate of six per cent is reached with the seventh thousand of taxable income. As in the case of individuals, the grades or steps of taxable income are uniform at \$1,000 each and the rate advances from 2 per cent to the first \$1,000 to $2\frac{1}{2}$ for the second, 3 for the third, $3\frac{1}{2}$ for the fourth, 4 for the fifth, 5 for the sixth and 6 for all above \$6,000.

This scale of rates was adopted by the legislature of 1913 as a substitute for a scheme contained in the original law which attempted to adjust the rates according to the proportion which the net income bore to the assessed value of the property used in producing the income. The original plan was found to be impracticable and to some extent inequitable. During the year it was in force it was found that the average rate paid by individuals was 1.96 per cent while the average for corporations was 5.4 per cent. Under the present law a corporation would need to have a taxable income of \$30,000 before the last mentioned rate would be reached; but that sum is more than six times the average corporate taxable net income.

Penalties. The severest of the penalties are those prescribed for the violation of the secrecy of returns. They include fines of not less than one hundred nor more than five hundred dollars, imprisonment in the county jail from one to six months and imprisonment in the state prison for not more than two years, in the discretion of the court.

For failure to make returns, or intentionally false or fraudulent returns the penalties are a fine not to exceed five hundred dollars, or imprisonment not to exceed one year, or both in the discretion of the court. In addition authority is given to double the amount of the omitted tax and this is the only penalty which has thus far been enforced. A somewhat curious provision is that which makes

the assessor of incomes liable to a fine of five dollars for every question unanswered on an income tax return. It is hardly necessary to state that no prosecutions have been attempted under this provision of the law.

Administration. The distinguishing feature of the Wisconsin income tax law is the prominence given to the scheme of administration. Of the seventeen closely printed pages which contain the law in pamphlet form about two-thirds are devoted to the methods by which the law is to be administered. It was realized that the failure of all state income taxes in the past was directly traceable to lax methods on the part of local officials, and this danger was sought to be avoided by securing a higher degree of centralization. To this end the administration of the law was placed wholly in the hands of the permanent state tax commission. This commission appointed the writer of this article as "supervisor of the income tax" and the arduous task of arranging all the administrative details of a new and untried system was placed in his hands.

Assessors. In accordance with the provisions of the law assessors of income were appointed by the tax commission. These assessors were selected after a rigid civil service examination, from a large number of applicants, and with special reference to character, fitness and ability. No attention was paid to the political affiliations of the applicants. The appointments were for three years and the salaries ranged from \$800 to \$3,600. In the populous and wealthy counties in the southern portion of the state one assessor was appointed for each county; but in the more sparsely settled northern portions an assessment district was made to include two or even three counties. The result was that it was found necessary to appoint only thirty-nine income tax assessors for the seventy-two counties in the state. In a few of the more important counties the assessors were permitted to have assistant assessors and necessary clerical assistance. The office of county supervisor of assessment for the general property tax was abolished and the duties of such officers were transferred to the income tax assessors. The Wisconsin income tax assessor, therefore, really serves in a dual capacity—as assessor of income tax and as supervisor of the assessment of the general property tax.

Returns. Six different forms of return are used, separate blanks being provided for (a) individuals, (b) guardians, trustees, execu-

tors, agents, receivers, (c) firms and copartnerships, (d) corporations, (e) farmers and dairymen and (f) wage earners, salaried men and other individuals deriving their income from personal services.

All returns of incomes by *firms* and *individuals* are to be made to the income tax assessors before the first of March in each year. Upon receipt of these returns they are carefully edited and the assessors make an assessment of the tax in each case. If the assessor has reason to believe that a return is erroneous or does not disclose the full amount of income he can increase the amount upon which the tax is based upon giving written notice to the taxpayer. A board of review of three persons is appointed by the tax commission for each district. An appeal lies from the decision of the assessor to the board of review, and then from the board of review to the tax commission. It should be noted, however, that very few such appeals have been taken.

The corporations are assessed directly by the tax commission and are given a right of appeal to the circuit court of Dane County, the county in which the capital of the state is situated.

Information at Source. The Wisconsin tax commission has organized a system of "information at the source" which has been found to work very efficiently and smoothly. When the forms for income tax returns are given out they are accompanied by blanks upon which the taxpayer is required to fill out the name and address of every person to whom a salary or wages to the amount of seven hundred dollars or more has been paid during the year and the amount paid in each case. There is an additional blank for corporations upon which the names and addresses of all stockholders to whom dividends have been paid, together with the amount paid, are given. In like manner claims for interest paid on indebtedness must be accompanied by a statement of the name and address of the person to whom such interest was paid. The information thus obtained by the tax commission is classified and arranged so as to be furnished to the assessors of the respective districts where the recipients of the wages or dividends reside.

This plan, which is not provided for in the law, but has been worked out by the tax commission under its general authority to make needful regulations, operates as a three-fold check. In the first place it will show whether any excessive salaries are being paid to officers of the corporations; in the second place it enables the

commission to test the correctness of the corporate deductions for wages, salaries and dividends paid; and in the third place it calls attention to any omission on the part of individuals to report the full amount received by them as interest, wages or dividends. The deterrent effect of such a system will be at once apparent, and the tax commission thus becomes a sort of clearing house where a vast amount of information centers and is redistributed to the district assessors.

Exemption of Intangibles. It should be emphasized that the Wisconsin income tax law is not an additional tax supplemental to the general property tax, but is a substitute for the tax heretofore levied—or attempted to be levied—upon intangible personal property. Coincident with the passage of the income tax law, the general laws were amended so as to exempt from taxation: (a) Moneys; (b) Stocks and bonds; (c) "All debts due from solvent debtors, whether on account, note, contract, bond, mortgage or other security, or whether such debts are due or to become due."

In order that the owner of *tangible* personal property should not be placed at a disadvantage as compared with the owner of intangibles, the income tax law provides that the receipts for general taxes paid on personal property may be used as cash in paying the income tax. This is called "offsetting." For example, if a person's income tax is, say, \$27 and he has paid taxes on personal property to the amount of \$15 he can turn in the personal property tax receipt and \$12 as full payment of the income tax.

Application of Proceeds. The Wisconsin income tax is not a *state* income tax in the sense that it is applied to *state* purposes. The law provides that the moneys raised by means of the tax shall be apportioned in the proportion of 70 per cent to the local taxing unit (city, village or town) where it was collected; 20 per cent to the county and the remaining 10 per cent to the state. It was thought that the 10 per cent given to the state would about cover the expenses of administration, but the amount actually received was more than double the cost of collection. In the first year of the tax when the expenses were unusually large the total cost of administration (about half of which was incurred in connection with general taxes) was approximately \$100,000, while the state's share of the tax actually collected was \$220,000.

The amounts of income taxes assessed, both individual and cor-

porate, are certified to the respective county clerks by the tax commission and assessors and again by the county clerks to the city, town and village clerks.

There has been some complaint on the ground that the insertion of the amount of income tax in the tax rolls was a violation of the secrecy required by the law. But the tax rolls must, under the general law, be public records and the amount of income tax paid is far from being a reliable index to one's financial condition. A large income may be derived from dividends, the tax upon which is paid by the corporations at the source, so that the individual income tax may be very small. Even the income of salaried persons may be so reduced by exemptions and deductions that the amount of tax throws no light upon the total amount of gross income received.

Income from Interstate Business. A leading authority on income taxation has suggested that an insuperable obstacle to the success of a state income tax would be the practical impossibility of drawing the line between interstate and intrastate income. Income flows back and forth across state lines so constantly that the question of its situs for purposes of taxation is a very complicated one. The solution of this problem which has been attempted in Wisconsin presents some interesting features and is outlined in the following quotation from the law:

In determining taxable income, rentals, royalties and gains or profit from the operation of any farm, mine or quarry shall follow the situs of the property from which derived and income from personal service and from land contracts, mortgages, stocks, bonds and securities shall follow the residence of the recipient. With respect to other income, persons engaged in business within and without the state shall be taxed only upon such income as is derived from business transacted and property located within the state, which may be determined by an allocation and separate accounting for such income when made in form and manner prescribed by the tax commission, but otherwise shall be determined in the manner specified in subdivision (e) of subsection 7 of section 1770b of the statutes as far as applicable.

The section of the statutes referred to authorizes a computation by taking the gross business in dollars of the corporation in the state and adding the same to the full value of the property of the corporation located in the state. The sum thus obtained is used as the numerator of a fraction—the denominator of which is to consist of the total gross business in dollars of the corporation both with-

in and without the state added to the full value of the property of the corporation within and without the state. The quotient of the numerator divided by the denominator is a decimal which indicates the proportion of the whole net income which should be apportioned to Wisconsin.

This somewhat complicated and arbitrary method is applied quite frequently, but sometimes leads to grotesque results. For example, a foreign corporation may have a large amount of property in Wisconsin but its business, so far as Wisconsin is concerned, may be carried on at a great loss. Nevertheless, if profits have been large in other states, the application of the above rule might show a considerable income for Wisconsin. Yet on the whole the plan has worked more smoothly than was to be expected. In speaking of interstate corporations the report of the tax commission for 1912 uses the following language:

The Wisconsin income tax has, on the whole, encountered very little difficulty with this class of taxpayers, and such difficulty as has been encountered can be avoided very largely in subsequent years. . . . The large foreign corporations have dealt quite as fairly with the Wisconsin income tax as any other class of taxpayers. It is just as easy to assess the big interstate corporations under the income tax as it is under the property tax.

Results. As a fiscal measure the Wisconsin income tax has far exceeded the expectation of its most enthusiastic sponsors. When the law went into effect many doleful predictions were made as to the probable yield of the tax. It was freely prophesied that Wisconsin would only duplicate the experiences of other states and that the amount collected would scarcely suffice to pay the cost of collection. Even the friends of the measure did not estimate the probable yield at over one million dollars, and it was realized that the administration of the tax would be attended by many peculiar difficulties in the first year of its operation.

Under these circumstances there was no small surprise when it was found that the income tax levy of the first year (based on income of 1911, collected in 1912) amounted to the very respectable sum of \$3,501,161.46. In the second year the amount was \$4,091,090.30.

This remarkable showing will perhaps be better appreciated when it is remembered that the Civil War income tax yielded for the first year, 1863, only \$2,741,858 or about 78.3 per cent of the first

year's levy in Wisconsin. The amount levied on corporations by the Wisconsin law for the year ending December 31, 1912, was \$2,793,605.40, while for the year ending June 30, 1912, the federal excise tax on corporations in Wisconsin amounted to only \$575,550.61, or about one-fifth. In this connection it must be remembered that 29 per cent of the amount of net income assessed against corporations under the federal law was from railroads, public utility corporations, insurance companies and national banks, all of which were exempt from the state income tax. In the first year of the federal income tax law the amount collected from individuals in Wisconsin was \$220,642 and from corporations \$497,785, or a total of \$718,427—about one-sixth of the amounts assessed under the state law. Of course the differences in rates and exemptions must be taken into account, but, leaving those elements out of the computation, it would seem evident that the amount of taxable income discovered by the state system in the case of corporations was materially greater than that brought to light by the federal methods.

The amounts actually collected in Wisconsin have very greatly overbalanced the losses occasioned by the exemption of intangible personal property. As the result of a careful and thorough investigation, recently made under the direction of the tax commission, it was found that the decrease in the personal property assessment caused by the exemption of intangibles was \$40,077,695 and the corresponding property tax which would have been collected on that sum was \$703,589.35, or about one-sixth of the amount of income tax levied. It should be stated, however, in fairness, that the amount of income tax *collected* is much less than the amount *levied*. This is due to the privilege of "offsetting" personal property tax receipts. It is estimated by the tax commission that, for the year 1912, about 37 per cent of the whole income tax was paid by personal property tax receipts.

The *average* rate of taxation upon individuals and firms was 1.96 per cent and upon corporations 5.4 per cent. About 40 per cent of the whole tax is assessed in Milwaukee County and 80 per cent is assessed in the seventeen counties which contain the larger cities.

The total cost of administering the income tax for the year 1912 was \$92,480.29 and this included payment for the salaries and expenses of the income tax assessors in connection with the assessment of the general property tax.

But the success of any tax law should not be measured wholly by its financial results. If the scheme of taxation proposed does not commend itself to the average citizen as just and equitable, it can hardly be expected to be permanent in a country where the power of making and unmaking the laws is vested in the people. Of all fiscal measures an income tax law is one of the most direct in its application and the first enforcement of such a law is apt to evoke violent opposition from those most affected by it. In this respect Wisconsin was no exception. In the first year of the operation of the law a state election was held and the question of income tax or no income tax was the predominant and almost sole issue of the campaign. Both political parties were split into factions, but the Republican candidate for governor espoused and defended the income tax while his Democratic opponent waged a bitter war against it. The vote at the polls would seem to indicate that public sentiment favored the tax. At the present writing another campaign is in progress with the same Democratic candidate for governor in the field but he has taken pains to announce publicly that he will not oppose the income tax. The consensus of public opinion throughout the state seems to be that "the income tax has come to stay," and that, however objectionable in some respects, it is a distinct improvement upon the personal property tax which it has supplanted.

Objections and Criticisms. It is too much to expect that a law drawn by men who had no practical acquaintance with the subject and but little theoretical knowledge should be complete and perfect in all its details. Such a law can only approximate perfection after years of careful adjustment and re-shaping to make it conform to the human equation which, after all, is bound to be the controlling factor in its success or failure.

Some of the objections most loudly urged against the state income tax are precisely those which deserve the least consideration. For example, the assertion that the law is inquisitorial may be answered by saying that it is not nearly as inquisitorial as the personal property tax would have been if it had been strictly enforced. The statement so often made that it "makes a nation of liars" can easily be shown to be false. Any person who, like the writer, has had occasion to review and test the correctness of thousands of income tax returns will be impressed by the evident truthfulness and honesty with which the vast majority of such returns have been prepared.

In one thousand returns which were defective or erroneous it was found that more than one-third contained errors which had the effect of *increasing* the tax. Of the remainder the very great majority were erroneous through obvious ignorance or misunderstanding of the provisions of the law. The number in which there was any evidence of a deliberate attempt to defraud the law was very small—safely under five per cent.

The objection that the law taxes thrift is equally applicable to all tax measures. The predictions that the enforcement of the law would drive capital from the state have not proved correct to any appreciable extent. But there are objections to the law in its present form which are sufficiently serious to call for careful consideration at the hands of the legislature. For example, the double rate on corporations does not appear to be justified by the comparatively slight advantages which accrue from incorporation. The provisions for appeals are not satisfactory to the public as there is an impression that the tax commission is, so to speak, "judge of its own cause," and is disposed to favor the state as against the taxpayer in doubtful cases. The rule for the taxation of income from interstate business is somewhat crude and does not always work out fairly. The inclusion under the head of income of gifts and inheritances is hardly scientific, and the same may be said of income which had accrued and become payable before the law went into effect and was therefore more in the nature of capital. The whole question of wasting assets, particularly in the case of mines, awaits some more satisfactory solution than is offered by the Wisconsin law.

These, and other minor points which might be mentioned, are some of the questions with which the legislature will have to deal if the Wisconsin law is to be made a model for other states.

THE WISCONSIN INCOME TAX

BY THOMAS E. LYONS,
Wisconsin Tax Commission.

During the last half century the trend of opinion on the subject of taxation has strongly set in the direction of the faculty tax or contribution to the support of government in proportion to ability to pay. In theory at least this principle of taxation is both attractive and convincing and it has received the endorsement of publicists, economists and students of taxation generally. Under normal conditions all taxes are paid out of income and a system, which exacts payment from those who have the means to pay, relieves those who have not, taxes moderate income lightly and large income more heavily, makes strong appeal for popular favor and has much to commend it on the economic side. For nearly a hundred years the income tax principle has been utilized in European countries and in one form or another now constitutes an important element in the fiscal system of every advanced country in Europe except France. Its highest development is found in England and Germany, where the annual yield aggregates over \$200,000,000 in each country.

Prior to 1913, the income tax had never been generally adopted in this country. It was resorted to by several of the colonies prior to the adoption of the constitution, but not in its modern form. The Civil War income tax contributed \$372,000,000 to the general government from its adoption in 1862 until its repeal ten years later. A general income tax act was enacted by Congress in 1894, which the supreme court held to be in conflict with the federal constitution as it then stood. The adoption of the sixteenth amendment expressly authorizing the raising of revenue by this means, followed by the federal act of 1913, is therefore the first step toward a permanent adoption of income taxation in this country.

In the meantime about twenty states had experimented with an income tax in one form or another. Several of the Atlantic and Southern states adopted this means of raising revenue about the middle of the last century and extensive use was made of the system by the states of the Confederacy during the civil war period. Few,

if any, of these enactments, however, provided for the taxation of all forms of income. As a rule they were confined to the taxation of income derived from sources not otherwise taxed, such as salaries, fees, commissions and profits derived from the purchase and sale of property.

The difficulty of allocating income derived from interstate commerce and the uncertainty as to whether any part of such income could be taxed by the individual states, operated against the general adoption of the system. Moreover, the states which did adopt an income tax committed the administration to local taxing officers, and the result was a lax enforcement and very meager yield. These unsatisfactory results led to a widespread feeling that income taxation was not practicable for the separate states and prevented the adoption of the system for many years.

In the meantime the subject of taxation was becoming more and more important. With the increase in urban population and the growing complexity of social and business conditions, taxes naturally increased. It was found that the property tax system, however well suited to primitive conditions and agricultural communities, no longer sufficed. It abounded in inequality and discrimination in the assessment of all classes of property and failed outright as to some. While the tax upon real estate absorbed from 10 to 20 per cent of the income therefrom, the property tax afforded no means of reaching excess earnings, or to secure any contribution from income derived from other than property sources. Wisconsin in common with many other states shared this experience. While it was estimated that the value of personal property in the state was equal to that of real estate, only about 18 per cent of the public revenue was derived from that source, and no serious attempt was made to reach intangible property at all. In 1909 six of the seventy-one counties of the state made no assessment of moneys and credits. A substitute for the broken down personal property tax was therefore eagerly sought for and students of the subject naturally turned to the income tax as the solution.

In 1908 an amendment to the constitution was adopted authorizing the taxation of incomes at graduated and progressive rates. The legislature of 1909 appointed an interim committee to study the subject and report to the legislature of 1911, and the present income tax law is the result. The act provided for the assessment of all in-

comes received during the year 1911, and the first assessment was made in 1912. We are now closing our third assessment under the law.

Under the federal constitution and decisions the legislature had the option to tax all income received by residents of Wisconsin, and all income received by non-residents from property located or business transacted in this state. Obviously the adoption of this program would involve certain inconsistencies. If residents of Wisconsin were to be taxed upon income from property located and business transacted without the state, consistency would require that income received by non-residents from property located and business transacted in Wisconsin should be exempt. If adjoining states should adopt a similar system, residents of this state deriving income from business and property in these states would be subject to a double tax. To avoid these difficulties the legislature finally decided to limit the tax to income derived from persons, property and business having an actual or constructive situs in this state. Accordingly residents of Wisconsin are taxable on all compensation for personal services received by them, whether in the form of salaries, commissions or other earnings, and upon all dividends from corporate stocks and interest on securities owned by them, regardless of the place of investment. The legal situs of such property and the income therefrom follow the residence of the owner or recipient. On the other hand income from fixed property, such as royalties or rents and profits from definitely localized business, is assigned to the district in which such property is located or business transacted. It follows that income of this latter character derived from property located or business transacted without the state is not subject to the Wisconsin tax

Substantially all forms of income flowing from these sources are subject to the tax. Public service companies, such as steam and street railways, telephone and telegraph companies, which are assessed by the tax commission and pay taxes directly into the state treasury, are exempt for the reason that the element of earnings is taken into account in the assessment of these companies under the property tax. Moreover, the property of these companies is declared to be personalty for the purpose of taxation and if assessed they would be permitted to offset their property tax against the income tax levied against them under a provision of the statute hereinafter

explained. The usual exemptions are extended to religious, charitable and educational institutions.

The basis of the tax is net income, ascertained by deducting from the gross income of the taxpayer for the year covered by the return the ordinary expenses incurred in producing it. This includes the cost of labor, material and goods, taxes, insurance, interest, depreciation and repairs. The rate is progressive in each case, beginning at 1 per cent on the first \$1,000 of taxable income in the case of individuals and progressing by easy stages of one-quarter of 1 per cent per \$1,000 up to \$5,000, and one-half of 1 per cent on each additional \$1,000 until the maximum 6 per cent rate is reached. All income above \$11,000 in the case of individuals, and above \$6,000 in the case of corporations is taxed at the uniform rate of 6 per cent. The corporation rate is double the rate of individuals until the maximum is reached. Under this method a taxpayer of moderate means with a taxable income of \$1,000 is required to pay a tax of only ten dollars, while his more prosperous neighbor receiving an income of \$10,000 pays not merely ten times as much or \$100, but twenty-five times as much or \$250. In like manner a corporation having a taxable income of \$1,000 is required to pay only twenty dollars tax, whereas its larger and more prosperous rival, with a taxable income of \$50,000, is required to pay not fifty times as much, or \$1,000 but one hundred and forty-two times as much, or \$2,840. The widow's mite still involves more sacrifice than the rich man's largess for "he pays out of his abundance but she out of her want."

As corporations pay the tax on their entire net income, provision is made for deducting the dividends received therefrom to avoid double taxation. The same is true of profits received from a partnership whose income has been assessed or is taxable under the law. The tax is computed on the entire net income before distributing it in the form of dividends or profits. Approximately two-thirds of the total tax levied under the Wisconsin law is derived from corporations, and one-twentieth from partnerships, indicating the extent to which it is possible to collect at the source. Another and very effective provision of the law is that of requiring corporations to report the names of employees who are paid a compensation exceeding \$700 per year as a condition of deducting that item of expense. Similar provision is made in the case of payment of interest, dividends and rent. These lists of payments are reported to the tax commission

in connection with the return of the corporate income and are then distributed to district assessors as a check against the returns made to them by the individuals receiving the payments. This provision is believed to be less complicated and quite as effective as the method of withholding the tax prescribed by the federal income tax act.

An exemption of \$800 is allowed individuals without family; \$1,200 for husband and wife; and \$200 additional for each child under eighteen years of age or other person dependent on the taxpayer for support. An ordinary family of five has therefore an exemption of \$1,800. Compared with the average income of the wage-earning class, these exemptions amply cover the cost of subsistence and are much more liberal than the exemptions allowed in European countries. Considering that all expenses of producing the income are deducted before the exemptions are taken out, it is plain that no poor person is required to pay an income tax under the Wisconsin law. An individual or family receiving a net income exceeding these exemptions is not poor in either the popular or economic sense. Only two per cent of the total population, or about one family in ten, is subject to the tax. As corporations have no physical needs and are not subject to the infirmities of natural persons, no exemptions are allowed to them. Moreover, in arriving at the taxable income of corporations the salaries of officers, as well as the wages of employees, are deducted. Their taxable income therefore represents profits from business and property only, exclusive of personal earnings, whereas natural persons are required to include income from personal earnings in their reports.

The tax is primarily for the support of local government. Seventy per cent of the proceeds is paid to the town, city or village in which the income is produced, 20 per cent to the county comprising the district, and 10 per cent to the state. It is not therefore an additional tax but merely another means of raising needed revenue for the support of local government. In preparing their annual budgets local officers are required by law to take into account the revenues available from other sources than the property tax, including the amount of income tax levied in and for each district. To the extent that a given community is required to pay an income tax therefore, it is relieved from the payment of a property tax. Bearing in mind that at least one-half of the income tax levied is derived from sources which escaped altogether under the property tax, it is clear that it

does not operate as an additional burden. Incidentally we may add that the 10 per cent of the net proceeds of the income tax payable to the state, after allowing the personal property offset, not only covers the cost of administration but defrays the entire expense of all the activities of the tax commission, including the salaries and expenses of assessors of incomes. The average cost of the Wisconsin income tax is about 1.2 per cent of the amount assessed, making it one of the cheapest taxes known.

Perhaps the most distinctive feature of the Wisconsin law is its centralized administration. The state tax commission is required to assess the incomes of all corporations and to prescribe rules and forms for the assessment of the incomes of individuals and partnerships. The commission is authorized to divide the state into assessment districts and to appoint subordinates to assess the incomes of individuals and partnerships in their respective districts. The state has been divided into forty-one districts and an assessor of incomes appointed for each district at a salary fixed by the commission. These appointments are made under civil service rules, for a term of three years, and the assessors work under the direction of the commission and are subject to removal from office for adequate cause. They are wholly free from local or partisan influence and have proved a very efficient force.

The agitation for an income tax in Wisconsin grew out of dissatisfaction with the personal property tax which it was originally designed to replace. Accordingly substantial exemptions of personal property were made by the law which created the income tax. All moneys and credits, household furniture, farm machinery and numerous minor classes of personal property were exempted by that act. As the law was untried and its validity certain to be questioned in court, it was deemed prudent to retain the tax on tangible personal property until the effectiveness of the income tax could be more fully tested. Provision was accordingly made for the deduction of personal property tax paid by any person for a given year from the income tax levied against him for the same year. Owners of taxable personal property, therefore, pay no income tax unless it exceeds the amount of their personal property taxes.

The first assessment under the income tax law for the entire state resulted in a tax of \$3,501,000, and the second assessment in a tax of \$4,094,000. The assessment for the current year just com-

pleted shows a tax of \$4,140,000. These figures fairly represent the revenue producing power of the income tax, but the net yield is materially reduced by the offset provision referred to. Approximately one-half of the amount of income tax assessed is subject to offset by the personal property tax. The net yield of the 1913 income tax based on 1912 income, excluding disputed items in litigation, was \$1,935,846, and the same proportion of the assessment of the current year is likely to be wiped out by the personal property offset. As the tax on personal property is required to be paid in full in any event, and only the difference between that amount and the income tax is collected, the net proceeds mentioned fairly represent the amount of revenue derived under the Wisconsin law from sources not reached by the property tax at all.

The conventional criticism of a state income tax has long been that it is all right in theory but will not work in practice. The experience of all the states which experimented with the system prior to 1911 could well be cited to sustain this claim. Obviously if the criticism is well founded it constitutes a fatal objection to a state income tax. In last analysis, a fiscal system must be tested by results. The important question, therefore, is, how has the Wisconsin income tax law actually operated in practice? The first and most obvious test of a tax system is its power to produce revenue and, as already shown, the Wisconsin law has fairly met this test. The average annual assessment for the three years during which it has been in operation is approximately \$4,000,000. The total yield of the Civil War income tax during the first year of its operation was less than \$3,000,000. The highest tax ever collected in any other state in a single year under an income tax was less than \$200,000. The income tax assessed in the county of Milwaukee alone in 1913 was \$1,825,024. Compared with the results of other state income taxes, the Wisconsin law is facile princeps as a revenue producer.

Experience thus far has shown that the principal yield of the income tax comes from the centers of business and population. It is therefore primarily an urban tax. Milwaukee city alone contributes over 40 per cent of the taxable income assessed, and fifteen counties containing the principal cities furnish 75 per cent of the total for the state. Less than one-half of one per cent of the population in strictly rural districts is subject to the tax, and the yield is comparatively insignificant. The limited cash profits from agriculture,

and the large exemptions, practically exclude farmers from the operation of the law. In several rural districts the yield is not sufficient to make up for the personal tax on moneys and credits and other property exempted by the act. Inasmuch, however, as the revenue derived is mainly distributed to the districts which produced the income no serious injustice results. To the district which has of income is given of taxes. An amendment to the law increasing the proportion distributed to state and county would tend to correct this defect.

The income tax is also primarily a tax upon the rich and well-to-do. Analysis of the assessments of a selected group of 382 persons subject to the tax in the city of Milwaukee for the year 1912 showed an aggregate income tax of \$176,808. Of this number, 88 persons, whose taxable incomes were less than \$1,000 each, paid only \$487 aggregate tax. One hundred thirty-nine (139) persons belonging to the group, whose taxable incomes exceeded \$10,000, paid \$168,822 income tax, or 95 per cent of the total. The total income tax assessed against 3,172 individuals in Dane County for the current year is \$67,050. Of the number assessed 2,150 had a taxable income of less than \$1,000 each, and their aggregate tax was only \$8,496.80, or about one-eighth of the total, whereas six persons, having an income of over \$15,000 each, will pay \$23,202 income tax, or more than one-third of the total tax assessed. In the city of Sheboygan five of the 1,272 persons assessed pay more than one-fifth of the total tax.

A comparison of the personal property tax with the income tax according to the amount of income shows that the average person whose income is less than \$1,000 has four dollars more personal property tax than income tax whereas those having a taxable income between \$5,000 and \$10,000 pay an average of twenty-two dollars more income tax than personal property tax. More striking still, the average taxpayer having an income in excess of \$10,000 in the selected group first mentioned pays \$659 more income tax than personal property tax.

An analysis of assessments by occupation yields equally interesting results. Twenty-five lawyers included in the selected group paid a personal property tax of \$4,237 in 1911 as against an income tax of \$12,360 for 1912. Twenty-one other professional men who were assessed for \$9,137 income tax paid a personal property tax of

\$811. Forty brokers, salesmen and solicitors paid an income tax of \$13,974 in 1912 as against a property tax of \$1,803 in 1911. Seventeen capitalists, whose personal property tax was \$1,448, paid an income tax of \$13,233 in 1912. These figures clearly show the unequal operation of the personal property tax and the greater efficiency of the income tax in securing revenue from those who are best able to bear the burden. Obviously, measured by ability to pay, the person having a small taxable income was overcharged under the personal property tax, and the person having a large income did not contribute his share.

Perhaps the most important result of the income tax law in this state is its effect upon the administration of the property tax. As predicted by Professor Adams before the law was enacted its by-products are more valuable than its direct results. The assessors of incomes above referred to supervise the administration of the property tax and their services in that respect have been no less important than in assessing incomes. Selected by a merit test, free from local influence, constantly employed and therefore becoming increasingly efficient, they have made marked improvement in the administration of the property tax. While increased valuation does not necessarily mean good assessment, it strongly points in that direction. After ten years of effort on the part of the tax commission to secure some approach to a legal assessment of property, the average ratio of assessed to true value was less than 65 per cent. The first year's experience under assessors of incomes increased this ratio to 73 per cent, and the second year to 81½ per cent. Complete returns have not yet been received from all districts of the state for the current year, but reports from assessors of incomes indicate that many districts have been assessed on a substantially full value basis, and that the average ratio of assessed to true value for the state will not fall materially short of 85 per cent. This result may be ascribed in large measure to the income tax law with its accompanying exemption of moneys and credits and the provisions for the appointment of assessors of incomes.

It is often urged that the income tax is inquisitorial, but so is every tax when properly administered. Under the property tax law the assessor may examine the taxpayer and call his neighbors to testify as to the amount and value of his property. He may even disregard the taxpayer's sworn statement and increase the assessment

according to his own judgment. Every community will continue to raise revenue by taxation in one form or another, and as the burden increases will insist upon the necessary information to measure the amount. Concealment and evasion will not permanently avail. The choice, therefore, lies between a system which reaches all sources of revenue, automatically adapts itself to changing conditions, takes note of the productiveness of different classes of property and graduates the burden accordingly, and a partial, rigid, mechanical system with a long train of failure and injustice in its wake.

Objection is often made that no state can tax income derived from interstate commerce, and numerous expressions are found in the books to that effect. But the courts have repeatedly held that any state may tax property engaged in interstate commerce if a reasonable basis of apportionment be used to determine the proper proportion assignable to that state. Why should not the same rule be adopted in the case of income derived from interstate commerce? If Wisconsin cannot tax income from this source no other state can do so, and the result is a legal no-man's-land where vast and prosperous organizations may operate, relieved from the burdens which others are compelled to bear. All agree that neither property nor income from interstate commerce should be singled out for invidious discrimination, but that is a very different thing from requiring it to bear its just share of the public burden. If there is any doubt or uncertainty in the law in this respect, why should not Congress, which has supreme control of the subject, authorize the several states to tax either property or income from interstate commerce according to any system of taxation applicable to other property and business within their borders, under reasonable rules of apportionment. It has already made such provision in the case of national banks. Such a declaration on the part of Congress would solve many difficulties and remove many doubts. With this obstacle out of the way, it is believed that income taxation may be resorted to by any state with advantage to its own revenue and greater equality in the distribution of public burdens among its citizens.

THE INHERITANCE TAX

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In this brief discussion of some salient principles and provisions of the inheritance tax it seems unnecessary to review its history or growth, except to say that until the adoption of the law of 1885 in New York, little consideration was given to it in this country. Since then, more especially in the last dozen years, the inheritance or transfer tax has been adopted into the taxing system of one state after another, until at the present time it is in force in about four-fifths of the states of the Union.

"Taxes" may be divided into two general classes: (1) Those which constitute a contribution by the taxpayer out of his substance to the support of government, such as most of our ordinary taxes, licenses and fees, especially the so-called "general property tax;" (2) Those which are merely a payment to the government of a portion of the social product, such as the royalty reserved upon mines and minerals, rental value of franchises, the proposed single land tax. The latter so-called taxes are no burden, being merely payment for value received.

The inheritance tax belongs to the first class, but is probably the least burdensome of that class of taxes; for, as prevailing in the several states, the rate is usually very moderate; it is paid out of property just acquired by the taxpayer,—usually property that has not caused the taxpayer any great effort in its acquisition. Its popularity is testified to by the fact of its rapid adoption by state after state in recent years.

The Wisconsin law is modeled upon the New York law as it existed prior to 1911 and is fairly typical of the laws prevailing in most of the states. Its salient features may be briefly summarized as follows:

The tax is in legal theory upon the transfer or the right to receive the property of the decedent, not upon the property itself. But the tax is measured by the amount of property passing to the beneficiary, and is made a lien upon such property, and a personal charge

against the executor and the beneficiary, until paid. A tax is imposed not only upon the transfer of property by will or intestate law, but also upon any transfer by deed, grant, bargain, sale or gift made in contemplation of death of the grantor, vendor or donor, or intended to take effect in possession or enjoyment at or after such death.

The primary rate is 1 per cent when the transfer is to husband, wife, children, father or mother; $1\frac{1}{2}$ per cent to uncles, aunts, nieces and nephews; 3, 4 and 5 per cent to relatives further removed, according to degree of kindred; and 5 per cent to strangers in blood, corporations and other organizations, except municipal, religious, charitable and educational corporations within the state, which are exempt.

The above primary rates apply to the first \$25,000 received by the beneficiary. The next \$25,000 bears a rate of $1\frac{1}{2}$ times the primary rate; the next \$50,000 twice the primary rate; the next \$400,000, $2\frac{1}{2}$ times the primary rate; and all above \$500,000, 3 times the primary rate. Thus it will be seen that a distant relative or a stranger in blood will pay 15 per cent upon the excess over a half million dollars that he may receive.

An exemption from the tax is allowed of \$10,000 to a widow; \$2,000 to each of the other relatives named in the first section; \$500 to those in the second section; and lesser amounts to more distant relatives, down to \$100 to those in the fifth class. These exemptions are taken out of the first \$25,000.

The inheritance tax is imposed and collected during, and as a part of, the settlement of estates in the county or probate courts, and is usually paid by the executor and charged against the share which he is required to pay over to each beneficiary upon such settlement. This tax goes usually to the state for state purposes, except such small amount thereof as may be necessary to cover the expenses connected with its administration in court.

The above outline summarizes the law sufficiently for the general reader. It will be seen that the rate is light in the smaller estates and to near relatives, becoming heavier as the estate increases in size, and the relationship of the beneficiary becomes more distant; but becoming at no time exorbitant or particularly burdensome. In the smaller estates where the deceased leaves a widow and several children, the exemptions commonly exceed the value of the estate, no tax being paid. Ordinarily the procedure is simple and inexpensive,

and the tax is paid promptly by the executor or administrator of the estate out of ready money or other property in his hands.

However, a relatively small number of estates involve questions and situations that have caused much discussion, some litigation, and an amount of criticism that has assumed more heat, it is thought, than the facts warranted. If a decedent lived in one state and owned property in another state, to which state should the tax be paid? Quite early in the administration of the law it was decided that if the property is real estate, the tax is due to the state where the land is located. This rule has been affirmed repeatedly and has received general acquiescence.

Where, however, the foreign property is personal, it was early held to follow the residence of the owner and to be taxable in the state where the deceased had his domicile. But numerous states held that the property was taxable in the state where located, and in such cases the same property was subjected to double taxation. After eliminating all real estate, and all personal property located in the state of the owner's domicile, the property so subjected to double taxation is relatively unimportant in amount, and not sufficient in any sense to serve as a basis for condemnation of the law. Nevertheless, possible double or multiple taxation is a problem of sufficient moment to demand the careful attention of students and legislators.

The most common instances of such taxation occur in relation to corporate stocks and securities. An actual instance in point was where railroad stock of deceased was subject to the tax of Wisconsin because this state was his residence; in Illinois because the stock was physically in that state, being kept in a safety deposit box in Chicago; and in Utah because the railroad company is a Utah corporation.

Such cases are rare. The inheritance tax laws of most of the states are relatively new, and more or less imperfect. We may confidently expect that through state comity and the ordinary human sense of fairness such injustices will gradually be amended out of the laws.

An effort was made in New York to take a step in avoidance of such double taxation, by the exempting from taxation of stocks of New York corporations when left by a non-resident decedent, on the theory that corporate stocks are personal property and should be taxed only at the domicile of the decedent. The Wisconsin theory, and probably that of other western states, is that the stock is merely

the paper representative of the actual property and that all taxes, including the inheritance tax, should be imposed and collected at the place of location of the property. The property must be protected by, and at the expense of, the state where located. The rights of parties concerning such property must be enforced in the courts of that state. The people of the locality usually furnish the custom or business that supports the property and gives it value. Hence it is the locality that needs the tax for its public purposes and is equitably entitled thereto. New York, of course, finds its theory in full accord with its financial interests, for it is probable that only a relatively small amount of its domestic corporate stock is held without the state, while residents of New York are holders of immense quantities of foreign stock, the transfer tax upon which that state would hesitate to surrender.

The New York argument is based chiefly upon the proposition that the tax is not upon the property but upon the transfer. While this is the practically unanimous holding of the courts, and is the law, yet as an economic truth I submit that the proposition is open to serious doubt. As an economic proposition it is probably true that the inheritance tax is a tax upon the property, burdening the property to the extent of the tax, and reducing its market value to that extent, as much so as a direct tax of like amount and frequency. Dealers in securities, investors and promoters object strenuously to drastic inheritance tax laws, alleging that they tend to depreciate the selling value of securities, and make them undesirable as investments. This could not be true if the tax were not a burden upon the property itself.

The recent amendment to the Wisconsin law (section 1087-11, subsections 3-8, statutes of 1913) is intended as an important step toward the elimination of double taxation, without surrendering the right to tax the transfer of securities representing Wisconsin corporate property. It provides in substance that the stocks, bonds and other securities of a non-resident decedent shall be subject to the inheritance tax in this state at a value proportionate to the value which the Wisconsin assets of the corporation bear to the entire assets. It is true that this law does not cover the entire situation, nor have its administrative problems been fully worked out.

The purpose of this law is to place all forms of property in the state on the same basis as real estate, which is commonly conceded to be taxable only in the state of its situs. Even local real estate under

the New York law would not necessarily be subject to the inheritance tax, for in the larger cities great mercantile buildings, office and bank buildings, hotels, theatres and similar properties of tremendous values are frequently, perhaps commonly, owned by corporations; and such properties might pass for generations without coming within the purview of the inheritance tax law of the state where located if the transfer of stock is held to be taxable only at the domicile of the deceased stockholder. All of the stock might readily be held out of the state. Railroads, street railways, gas, electric and water plants, water powers, manufacturing plants, mines, quarries, all are chiefly real estate values, and are usually corporate properties, the stock of those in the newer states being held largely in the east and at the great commercial centers.

What has been said of stocks is equally true of bonds and mortgages. A mortgage must be considered, as it commonly is, an interest in the real estate, since the owner of the real estate after death has his debts, including the mortgage, allowed as a deduction in arriving at the net estate passing subject to the tax. Hence if the mortgage, held by a non-resident, should not be taxed upon the death of the owner, it would in reality take a large amount of real estate value from under the operation of the tax at the situs of the real estate. What is true of mortgages is true of bonds. A difficulty of enforcing the tax upon the transfer of bonds is that they may be transferred usually by manual delivery, except in the case of registered bonds; and it is not easy to know of their existence in a foreign estate, either on the part of the officials of this state or of the corporation.

Argument is frequently made on behalf of the inheritance tax as an economic measure, designed in some degree to reduce "swollen" fortunes. There is no basis for such argument; and a state tax heavy enough to have that effect would probably drive much of the liquid capital out of the state, and prevent capital from coming in. To be sure, the maximum rate in Wisconsin is 15 per cent, a rate that would cut materially into the principal of a bequest. But that rate has never been applied to any estate; and when it is recalled that it applies only to the excess over \$500,000 of a bequest to a stranger, it may be surmised that it will not be applied very soon. Cases where the rate exceeds an average of 6 per cent are extremely rare. The average rate in the state is probably well under 2 per cent. As the tax is not payable until one year after death, it can in the vast majority

of estates be paid out of income without trenching upon the principal, even in the largest estates. No partial distribution of large estates to the public can be accomplished through present state inheritance tax laws. Such result might be attained by a heavy federal inheritance tax, if it did not do more harm than good by driving capital out of the country.

Serious objections to a national or federal inheritance tax present themselves. The inheritance tax is administered in the usual process of settling the estate in the probate courts. These are state courts over which the federal government has no jurisdiction nor control. With a federal inheritance tax it will become necessary for federal authorities to intervene in the state courts to protect the interests of the government and to collect the tax. The federal government to be effective would doubtless require its own appraisers, its own forms of notices, orders, records, reports and so on, duplicating the procedure of the probate court. All of this procedure must necessarily create a confusion of jurisdiction and of practice that would be irritating and expensive to the representatives of estates, and that in a great majority of cases would cause the estate a greater expense than the amount of tax derived by the government. It would also appear to be an unwise and improper encroachment by the federal government into a just and proper field of state taxation.

Whether the value of the dower and homestead interest of the widow in the estate of her husband should be included as a part of the taxable property of the estate, or allowed as a proper deduction in arriving at the net estate subject to the tax, is a question upon which the courts have disagreed widely. It is claimed on the one hand that dower comes to the wife by virtue of the marriage, and that the death of the husband serves only to consummate, not to transmit it; that it exists by virtue of the marriage relation, and does not accrue to the wife under the intestate laws of the state. Other courts hold that dower is an inchoate right or a mere expectancy becoming a vested right upon the death of the husband, and that this accretion of a vested right is such a devolution of property as is contemplated by the inheritance tax law.

In *Billings v. People*, 189 Ill. 472, the court held dower to be taxable as an interest in the estate of the husband passing to the wife on his death. In answer to the usual argument that dower is

a right existing during the marriage relation, and not created at the death of the decedent, the court says:

There are no laws of this state which are specifically designated as "intestate laws," and we are called upon to say what laws or systems of laws were referred to under that appellation by the act in question. The same term is employed in similar statutes in other states, and we have no doubt the laws referred to are those laws of the state which govern the devolution of estates of persons dying intestate, and include all applicable rules of the common law in force in this state. The statutes from which we have above quoted are intestate laws, and they govern, regulate and control the interest which the widow took in her husband's property at his death. As a general rule, the property of persons dying passes in two ways—that is, by will, or by descent in the modes provided by law; and when it does not pass by will, it generally passes by law—that is, by the law governing the disposition of property of persons dying intestate.

A like rule was laid down by the California supreme court in relation to the widow's "community interest" in the estate of her husband, the court holding that "the interest of the wife in the community property is a mere expectancy." (Estate of Moffitt, 153 Cal. 359.) The California court in a later case, however, very inconsistently, it seems, held that the homestead interest of the widow in her husband's estate is not a taxable interest. (Estate of Kennedy, 157 Cal. 517.) The rule as to dower of the Illinois and California courts would appear to be the better and more consistent view. The widow is ordinarily allowed an exemption of \$10,000 free from tax. This would appear to be a liberal allowance and should be held to cover all property passing to her from her husband's estate. Where the widow takes under her husband's will such provision is usually in lieu of dower, and is subject to the tax. In cases of intestacy she takes not only dower and homestead interests but certain specific personal property, such as clothing, jewelry and personal ornaments, a certain allowance pending the settlement of the estate, and a certain portion of the personal property varying from one-half to an amount equal to that of a child. These provisions are made by the same law that provides dower and homestead, and the reasoning of the Illinois court that all such provisions be broadly covered by the term "intestate laws" would seem the more reasonable and less technical construction.

Many other technical and more or less difficult questions arise

in the actual administration of the inheritance tax. Wills frequently provide for life estates with vested and contingent remainders, reversions, defeasible interests, and powers of appointment. The carving up of estates under such wills and the apportionment of the inheritance tax to the various interests are questions concerning which it is doubtful if the general reader will be interested. A sufficient variety of laws has been enacted and a sufficiently large and varied mass of court decisions has been rendered thereon so that several large-sized text books have been written upon the subject.

This tax produces nearly a million dollars a year in this state. In New York it produces several million dollars annually. It will, of course, produce an amount of revenue generally proportionate to the population and wealth of the state. It must be somewhat irregular in its operation from year to year, due to the uncertainty of human life. A number of unusually large estates may be offered for probate one year, and very few the next. These irregularities are accentuated where the county is taken as the taxing unit instead of the state. A single large estate has been known to pay more tax than all the other estates of the county paid in a half dozen or more years. Besides in the larger estates the property passing is not often confined to the locality or county, but is usually scattered in various parts of the state, often in several states. For these and other reasons, this should be a state tax and not a local or county tax.

It is certain that the inheritance tax has come to stay as long as the general property tax prevails, probably longer. It has been found a profitable source of income wherever put in operation.

TAXATION OF INTANGIBLE PROPERTY

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The taxation of mortgages differs in principle in no wise from the taxation of other forms of credit. A mortgage is an evidence of a right to share in the income of property, and under certain conditions to assume its legal ownership. A bond, a share of stock, a note secured by collateral, almost any form of intangible property except a personal unsecured note, is in essential legal and economic contemplation no different. Each has its own peculiar procedure for the enforcement of the rights it conveys, but the value of all is essentially based upon the present or potential earning power of the property lying behind the paper. The personal note is of value only because it may also become a lien upon property or because of the confidence felt in the ability of the person to make good his promises. This paper right is property only in the sense that it may be transferred from person to person and enjoys the full protection of the law. In discussing the taxation of mortgages therefore, the theory of the taxation of all intangible property must also be considered.

The laws relating to the assessment and taxation of intangible personal property have, as has often been stated, evolved from the general property tax. The theory is delightfully simple—sufficient reason to account for its stubborn general popularity. Taxes should be paid by those who can afford to pay them, those who have property possess tax-paying ability, therefore measure the taxes by the capital value of property owned.

Under a state of hand trades economics this theory works out a reasonable amount of justice. The essential characteristic of this stage of economic organization is the concentration in the same hands of capital, superintendence and labor. The product is sold near at home, credit is practically unknown, a rough capitation tax reaches the casual laborer, and the property tax reaches savings for they are promptly invested in a local or in fixed property. Coöperative business under this stage is limited to a partnership, the taxation of which differs in no wise from the individual. The union of the factors of

production in the persons of the partners is still the most common form of organization.

The land or personal property mortgage is the earliest form of credit to evolve from such a stage of society. But the money borrowed is usually procured, not as capital to carry on a business, but as a means to bridge temporary financial difficulties. Eventually, however, borrowing becomes recognized as a legitimate means of obtaining business capital, and the lender is considered as being rightfully entitled to interest as a share of the earnings of the property in which his funds were invested. When this occurs it naturally follows that this financial return to the lender is regarded as taxable property.

The old, old break in logic of course comes at this point. The property mortgaged is already assessed—the successive assessment of the mortgage is a second assessment on the *same property* or rather on the *income* of the same property. The answer of the proponent of credit taxation reveals the wide difference in thought of those who favor exemption of credits from those who favor their taxation. The taxation man says—“The owner of these credits enjoys an income, has a property right in his possession, and is as able to pay a tax as the man who happens to hold the physical property.” One thinks of taxing *things*, the other of taxing *persons*. The whole history of the futile attempts to tax credits is a history of this hazy confusion of thought. The man who proposes to exempt credits argues logically on the basis of the taxation of *things*, his opponent presses with equal logic the argument for *personal* taxation.

The invention of modern industrial machinery severed for all time the union of capital, management and labor, and fixed new means for the compensation of these factors for their respective shares in production. Labor and management secured fixed wages, capital took the balance as interest and dividends, according as the intangible evidence of contributions to capital were “bonds” or “stock.” A recital of the numerous new forms of business conducting production and transportation is here necessary. Suffice it to say that all the new modes for increasing the comforts and pleasures of life have increased the savings of the people and the possibilities for the further diffusion of those savings in investments of capital far from the home of the owner.

The first result of these changes was to confuse the thought on

property taxation and the laws providing therefor, the second was to increase the difficulty of enforcement.

Stock in corporations, like personal ownership of property, was early regarded as merged with the property and exempt from taxation. This was natural since early corporations were frequently local and resembled closely the partnerships from which they evolved. But here entered the first wedge in the logic of the property tax. A non-resident corporate stock held by a resident was left taxable, although if his property were held elsewhere as a natural person he would not be taxed except at the situs of the property. Again the confusion of thought—is it the *thing* or the *person* that it is desired to tax? The intervention of the artificial person—the corporation—makes clearer the difficulty of the underlying theory of the general property tax. If, as the writer believes, that theory contemplated the taxation of the person, measured by property, the *corporation* never was a logical subject of such a tax.

Bonds, through their analogy to mortgages were regarded as proper subjects of taxation. Throughout these laws the situs for purposes of taxation is the residence of the owner.

The existence of intangible credits, especially in a form other than mortgages, brings out another weakness of the property tax—the conflict of jurisdictions. The physical *property* where situated is located and taxed, the intangible is assessed and taxed to the owner where he resides, both on the legal theory that personal property follows its owner and on the economic theory that the *person* owes a tax allegiance to the *place* where he lives.

The foregoing is not intended to be historical, but to develop the elements of difficulty inherent in the theory of the tax which have made intelligent readjustment heretofore impossible. Had the change in industrial conditions been uniform, had it affected alike all persons and sections, the proper corrections would have been quickly applied. But at this point entered the difference between city and country. The state legislature was dominated usually by country interests, and the only reform suggested, exemption, was palpably favorable to the wealthy urban residents. The farmers would have none of it. In order that the city might be made to contribute measurably to state taxation the intangible property must in some form be taxed. Moreover the *personal* ideal—that every man should contribute to the public burden in proportion to his ability

—was shocked at any proposition wholly to excuse a large and wealthy class of the population from direct taxation.

But not only in economic theory were the difficulties insurmountable. The real breakdown was in administration. Real estate could be seen, so could tangible property of all kinds. The credit, the mortgage, note, bond and stock were veritable will 'o the wisp of taxation. The exemptions written in of stocks of domestic corporations, of federal bonds, of state and local securities left wide open avenues of evasion. The assessor had not only to detect the presence of property, but must ferret out as well its quantity, and its kind. And he was a locally elected officer in a government whose fundamental administrative theory has always been that efficiency consisted largely in getting re-elected. To do his duty he must antagonize those to whom he must appeal to hold his job. And if this were not enough the work he did was looked upon with disfavor by all who could really have done it, and the salary was fixed at about the value of the sort of men willing to accept it.

Reports of tax commissions for years have been filled with the statement of the practical results to which the difficulties enumerated have led. At last nearly everyone has admitted that changes must be made. In the main as regards mortgages these changes have been eight:

First—Exemption.

Second—Taxation as a share in the property, at the situs of the property and accompanied by a prohibition of any contract by which the mortgagor might agree to assume the tax. (California)

Third—The second plan without prohibiting contracts—a plan really amounting to exemption. (Wisconsin)

Fourth—A low rate of taxation imposed when the instrument is presented for recordation. (New York)

Fifth—A reduced and fixed rate of taxation, assessment made as before. (Maryland)

Sixth—A rigid system of private and public spying with liberal rewards to the spies. (Ohio—Iowa)

Seventh—A rigid centralized administration and a limited rate for all property. (Ohio)

Eighth—Substitution of a progressive income tax for all taxes on intangible personal property. (Wisconsin)

The first named alternative is utterly wrong from the viewpoint of personal taxation. It has found little recent acceptance. The

second plan fails to tax the *person* where he lives. It was alleged to have been shifted to the borrower. The third has been superseded by taxation in another form. The sixth is wholly indefensible and has been abandoned. The plans remaining are all of comparatively recent origin and each has points of real value.

The recording tax has the advantage of certainty of assessment and collection and of simplicity in administration. On the other hand it is almost certain to be shifted to the borrower. It gives the tax to the state or county where the mortgage is recorded and not to the civil division in which the mortgagee lives. It cannot be automatically collected for more than a single year, and therefore dries up the source of the revenue, and it creates a special class of credits in mortgages where no logical classification exists. It fails in a word to make the mortgagee pay a reasonable tax.

The fixed limited rate placed low enough to take only a reasonable part of the income has great attractions. It taxes the *owner* as a person where he resides. It rewards honesty by taxing the security voluntarily returned at a rate which still leaves a very reasonable return to the owner. The most distressing feature of the general laws taxing credits has been the assessment of some credits at face value and the imposition thereon of rates amounting almost to confiscation of the interest. In Virginia, for instance, a special fee paid officer examines the probate and circuit court records and reports for taxation all credits found. As he is appointed by the judge it is very likely that a large part of such securities are found and taxed. But how unfairly! Real estate is grossly undervalued, tangible personal property is little better assessed and credits not under the jurisdiction of this officer scantily returned. The limited low rate corrects these evils and appeals to many as the real solution. Certainly it is as good as any yet developed *if the credits are returned*. How futile such a plan is by itself may be illustrated again by Virginia. In 1913 money on deposit was placed in a separate category by the legislature and taxed at twenty cents on the one hundred dollars of valuation. The valuation in 1913 before the law became effective was \$14,002,721. In 1914, \$25,820,978 was returned. The tax in 1913 was \$208,640.50, in 1914, \$51,650.89. Bank reports showed deposits in 1914 of \$150,527,998. The problem is not solved *merely* by lowering the rate. The taxpayer will not volunteer any tax no matter how low. It must be assessed, and proper machinery must be provided for

that assessment. The fixed rate plan has a further defect. As public expenditures increase, as increase they must, revenues must increase to meet them. The great strength of the general property tax lies in its elasticity. But as groups are taken out of the general plan of that tax, the rate fluctuations of the remainder must be more violent to meet the changes in revenue demands. Just as the addition of a foot of water to the surface of a placid lake will become a destructive torrent when released to the narrow confines of a river, so a raise in taxes scarcely noticed when spread over the wide area of all property is felt severely if restricted only to a certain class of subjects. A further difficulty which is very real is the adjustment of a fair rate. That rate is not what reasonable persons might regard as a fair portion to take from the income, but the fair tax proportioned to the rate of income taken from other subjects of taxation, due allowance being made for under-assessment but not for non-assessment. This fair tax rate on intangible property varies from country to city and from state to state. It is low in the country and in the South; it is high in the city and in the North. The average tax rate on capital value of \$100 in Wisconsin is \$1.38, in Virginia, \$.58. In Milwaukee it is \$1.60 and in Richmond, \$.93. A fair tax on a credit in Milwaukee would be an unreasonable tax in Richmond, income conditions being equal. Taxes some years ago were found in Wisconsin to take approximately 15 per cent of real estate rentals. The percentage is probably greater now. The railroads of Virginia paid in 1912-1913, 25 per cent of net corporate earnings for taxes, net corporate earnings being net earnings from operation less debt charges. Since the owners of the stock paid such a percentage of *their* proceeds, should the owners of the *bonds* pay less? If it be argued that the owner of the farm or of the railroad (stock) has the advantage of the unearned increment on his property it may well be answered that the owner of the mortgage or the bonds had a property of much more stable value and one on which he can in time of need or opportunity more speedily realize.

A lower rate on intangibles frees the tax system of the virtual confiscation so often following occasional assessment. It does not in itself provide for adequate assessment of *all* credits, it does not meet the revenue demands. It tends to crystallize the revenue system in fixed rates and to render unstable the rates on all property remaining in the general property plan. These objections are met

by the new plan of Ohio. A low fixed limit is placed on all property, centralized assessment is provided by assessors appointed under civil service by the state tax commission. The weakness of the Ohio system lies in the attempt to place an arbitrary limit upon all taxes. This limit must be so low as seriously to cripple the legitimate functions of some governmental units or so high as not to restrict materially gross extravagance in the vast majority.

The Ohio plan further denies the dissimilarity of things which are really different and which should be differently treated for purposes of taxation. The income of intangible property comes to the owner net, of tangible property, plus charges for all the losses to which such property is subject. The capital value of the latter shifts daily as these numerous factors of expense increase or diminish. The capital value of a note or mortgage is named in the instrument itself. The income from tangible property may, within limits, be made to conform to an increased demand for taxes, the same change is not so easily accomplished in the case of credits. These fundamental differences should be recognized in all legislation dealing with the taxation of these classes of property.

There remains to be considered the most radical plan adopted by any state as a means of reaching intangible property—the Wisconsin income tax. This tax exempts intangible property from taxation and levies a tax upon all incomes above certain reasonable exemptions. The tax is administered by a central state commission which appoints under civil service and *controls* the assessors of incomes themselves. The rates provided in the law grade from 1 per cent on the first \$1,000 of taxable income to 6 per cent when the income reaches \$12,000. A tax is also levied upon corporations and partnerships. The law is far from perfect. It levies a heavier tax upon corporations than upon individuals and partnerships. It is designed not merely as a means whereby to tax the owner of intangible property, but of tangible property as well. The tax on corporations and partnerships is not a mere device to stop the income at the source, but taxes the corporate and partnership income *as such* independently of any tax liability on the part of the owners behind these mere fictitious creations of the law. The location of the *property* producing the income and not of the taxpayer is the test of taxability. The law shares the weakness of the recording taxes and special fixed rate levies in that the rates are laid wholly without refer-

ence to the revenue demands of the government. On the other hand it is eminently strong in the administrative features and *the incomes are assessed*. Unfortunately, because the individual, corporate and partnership provisions are complicated by offsets and exemptions, there are no statistics available which really show what incomes of individuals were really declared. The report of the Wisconsin commission for 1912 shows the assessment of income for the first year of the tax to have been \$100,845,863 of which \$44,311,315 was income of corporations and \$56,534,548 was returned by individuals and partnerships. If all the owners of Wisconsin corporations and partnerships were located in Wisconsin and Wisconsin people owned no outside securities the \$100,000,000 would of course represent the individual income actually returned. The highest assessment of intangible *property* ever made in Wisconsin was only \$73,055,104.

It will be seen that all the systems now in use by those states most advanced in tax reform wherewith intangible property is sought to be taxed, are defective to a greater or less extent. The writer believes that these defects arise from the same cause that has led to the failure of the general property tax to reach intangibles. The makers of all these laws appear not to have thought clearly whether it is the *person* or the *property* that is to be taxed. The writer believes there are two legitimate situs claims for taxes—the one where tangible property is found, the other where the *personal* owner of that property resides. This belief is not founded upon any benefit theory of taxation. Wherever property and government exist together, even in a wilderness, there must be means provided for the support of government, and property supplies those means. Wherever persons and government exist together the government must live and those persons must in some form share in its support. The ability to pay is measured in the one case by capital value, in the other by income. Either form of tax is unworkable without the other. No government in a new country could afford to wait upon the uncertain exigencies of incomes arising from the property within its borders, a crowded city supporting a great population only casually connected with tangible property cannot justly ignore incomes as a source of revenue. Alongside of these a third class must be mentioned—those persons, either corporeal or corporate, who through the ownership of special privileges operate certain kinds of enterprises of a non-competitive character. Transportation, banking,

insurance and the services of heat, light and power are of this kind. Such enterprises should not be assessed like property, but as units, including in one assessment the real, tangible personal, and intangible going values.

The matter of tax rates remains to be considered. It is believed that *all* subjects of taxation should feel alike the expenses of government and if those expenses increase *all* should share in the added burden. Tax rates fixed on one class of tax payers and elastic as to others are bad both because they render the one class indifferent to their civic duties, and the other unduly sensitive to changes in the rates. They invite legislative extravagance if the fixed revenues exceed legitimate demands, and compel niggardliness if the fixed sources fall short of expectations.

All taxes on tangible property should be at uniform rates within the locality levying the tax. Such an adjustment is simple, and works no hardship. In competitive business (where taxes are merely one of the elements of expense, and as such included in the selling price) the adjustment to the conditions imposed by such taxes is easy and simple. Comparative stability of rates is more important to competitive business than is the amount of the tax.

The rates on tangible property should also be imposed upon non-competitive business under the unit assessments. The rate on *personal incomes* (there should be no other income tax), imposed in lieu of all taxes on occupations and intangible property should never be less on the *income* than the tax rate on the *capital value* of property. It should be adjusted with a view to a rough approximation, at least, to the demands on the income of tangible property. If the progressive principle be applied, the rate should start well below this burden and end well above it so that the average may be reasonably close to the normal tax rate. To be specific: If a tax rate of one per cent takes ten per cent of property income, the income tax rate if it start at one per cent should progress so that the average income tax payer of that community would pay ten per cent. If the tax rate should then become two per cent the primary income rate and all the progressive rates should be increased by this one per cent. In this manner the *personal* taxpayer is made to take pot-luck with all others, and has an equal interest in public expenditures. This plan may be applied to each locality, to counties and to the state. It is simple. It supplies the proper demand for

personal taxation. It makes the personal tax reasonable—as the general property tax is not. It is flexible—as the substitutes, heretofore suggested, are not.

There should be no misunderstanding of one fact which all recent reforms make clear. No law is half so badly needed as is an honest and efficient administration of such laws as we may have. True, vicious laws form an excuse for non-enforcement, but it is mainly an excuse. The fact is that efficient and fearless law enforcement in taxation especially is so foreign to American experience that no one can say how well the laws we have had would have worked had proper machinery been provided for their enforcement. The auditor of Virginia added \$50,000,000 to the assessment of intangible property in two years by a vigorous exercise upon local officials of the mere power of persuasion. A few such real serious administrative efforts are worth a thousand volumes of Utopian legislation. After all, taxation, both on the part of the taxpayer and tax assessor, is a personal matter and can work well only when gone about with the same honesty and seriousness of purpose that characterizes the bulk of the other personal contacts of humanity.

NOTE—Since the above discussion deals primarily with the taxation of intangible property, and only with other subjects so far as their discussion was necessarily coupled with the main theme, it should be understood that the detailed views of the writer as to the taxation of tangible personal property, increment taxation, inheritance taxes and others not a necessary part of a property tax, are not expressed.

THE EXTENT AND EVILS OF DOUBLE TAXATION IN THE UNITED STATES

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Double taxation of the same property right is deemed to be inherently unfair and is specifically forbidden by the fundamental law of some states; and it may be said in general terms to be contrary to sound principles of taxation. To a certain extent the citizen is protected against double taxation caused by the arbitrary exercise of the taxing power, not only through the fundamental law of his own state, but also the Constitution of the United States. Nevertheless, it may be said that double taxation prevails to a greater extent in the United States than in any other part of the civilized world. This is primarily owing to the complexity of our system of government, whereunder the citizen and his property are subject to the taxing power of two distinct sovereignties, the state and the United States, and to the general ignoring of interstate comity in the exercise of the taxing power by the states over the persons and property within their own jurisdiction.

In the exercise by a state of its power of taxation over persons and property within its jurisdiction, there is double taxation, to a certain extent, in the popular, if not the legal, sense of the term; and this is the more frequent in the now admitted failure of the general property tax as an effective taxing system. Thus, the state may tax property and the income from the property. It may tax a stock of merchandise and the right to use that merchandise in conducting a business. A man may be taxed upon property and also be compelled to pay assessments for public improvements on the theory of the betterment of his property from the improvements, which may and may not exist in fact. There is another form of double taxation of the same value, though to different owners, in the taxation of land and the mortgage upon the land, though the existence of the mortgage reduces by so much the value of the land. These cases the law does not consider double taxation in the legal sense, that is, the duplicate taxation of the same property right.

As a rule, however, direct double taxation is sought to be avoided in the administration of the taxing laws of the states; and it has been repeatedly declared by the courts that it is never presumed, though it has been broadly stated that in the absence of constitutional restraints the power of the state to tax the same property twice is said to be the same as the power to tax once. That is, there is no federal constitutional question raised by the exercise of such a power where there is no arbitrary discrimination between those of the same class. Thus, in the universal adoption of corporate organizations it is recognized that the holders of corporate shares should not be taxed by the state, when the corporate property is taxed by the same state. On the other hand, in the case of mortgage taxation, it is also clear that there is no new property value created by the mortgage, but there has been in effect a division of the property value between the mortgagee and the mortgagor. This has been recognized in California and Oregon by a system of taxing the separate interests of the mortgagee and the mortgagor; and in the supreme court of the United States this system has been held to be valid under the Constitution of the United States (*Savings Society v. Multnomah*, 169 U. S. 421), where the court said that there was nothing taxed but the real estate mortgaged, the interest of the mortgagor therein being taxed to him and the rest to the mortgagee, and that in this there was no double taxation.

The statement in the opinion that there was no double taxation applied only to the case before the court, that is, where the statute of Oregon under consideration expressly exempted the mortgagee from taxation upon the note secured by the mortgage; but there was nothing to prevent another state, where the holder of such a mortgage note was domiciled, from taxing him thereon; and this latter form of taxation, that is, upon holders of notes secured by mortgages in other states, has been sustained by the supreme court as not violative of due process of law (*Kirtland v. Hotchkiss*, 100 U. S. 491). The practical difficulty which has prevented the general adoption of this California and Oregon plan of taxing mortgages is found in the impossibility of preventing the practical evasion of the tax upon the mortgagee, by enforced assumption of such tax by the mortgagor as a condition of the loan.

The ineffectiveness of the general property tax, in so far as intangible personal property is concerned, which is dependent

upon the disclosure by the tax payer of his possessions, is too notorious to require extended discussion. This ineffectiveness necessarily applies to the attempted taxation of mortgage notes as personal property, with the exception of the estates of widows and orphans in the probate court and of trustees who do not care to evade for the benefit of their beneficiaries. Such taxation of mortgage notes and other intangible personalty is practically repudiated by the public, so that the tax as a rule is only paid by those who are not able to evade.

The only remedy for double taxation of this kind in the state taxing laws is in the substitution of an effective taxing system for an ineffective one, thus recognizing the fundamental principle in taxation that effectiveness, and not equality, should be the primary aim. As has been well said, an effective system of taxation which cannot be evaded will tend to bring about equality, while a tax levied without regard to effectiveness, though ostensibly equal, may result in the grossest kind of inequality. This is illustrated by the success of the so-called mortgage recording tax in New York and other states resulting in a largely increased public revenue and in the successful application of the principle of classification in the registration of securities for taxation.

Double taxation is necessarily involved in the exercise of the taxing power by the independent sovereignties of the states and the United States. Thus, the enlarged taxing power given to Congress is illustrated by the new income tax law, and the new war tax will also involve double taxation in the taxation of forms of property which are taxed under state laws. This form of double taxation is the necessary result of our complex form of government, wherein the person and property of the citizen are subject to the exercise of the taxing power by the sovereignties of both state and nation.

There is another form of double taxation, however, which is not the necessary result of our complex governmental system, but is directly caused by the ignoring by the states of the fundamental principle of interstate comity in the exercise of their taxing power. Thus there is a widely diffused double taxation resulting from the subjection of the same property value to the taxing powers of different states, as where the owner of property is domiciled in one state and the property is located in another, or where the property

is in one state and the paper evidence of the property is in another, or in case of inheritance or succession taxation where the decedent is domiciled in one state and the property located in another, or the legatee is resident in still another.

Thus, it was forcibly said by one of our most eminent economists, Professor Seligman:

It need not be pointed out, that amid the complexities of modern industrial life equality taxation cannot be attained without a careful consideration of these problems. Today a man may live in one state, may own property in a second, and carry on a business in a third. He may die in one place and leave all his property in another. He may spend all his income in one town and may derive that income from property or business in another. He may carry on business in several states, or if he has invested in corporate securities, the corporation may be the creature of another state, or be situated to do business in a third. All these cases may affect foreign states or separate commonwealths of the same federal state, or separate cities or counties of the same commonwealth. The possible entanglements are well-nigh innumerable.

The due process of law and the equal protection of the laws guaranteed by the federal Constitution do not enforce interstate comity in state taxation except to a very limited degree. The jurisdiction of a state in taxation, as in other matters, is limited to its own territory. It can tax, however, not only the property located within its territory, but also the persons domiciled there; and if it can reach or discover the same, it can tax the intangible personalty of those domiciled within its jurisdiction wherever located, and it can also tax the business that is carried on within its jurisdiction, irrespective of the domicile of the owners of the business. The real difficulty in the application of the principle of interstate comity is in the fact that the jurisdiction of the state for taxing purposes extends, not only over property and business within its borders, but also over the persons domiciled therein. It may disregard the fiction that personal property has a situs at the residence of the owner, and may tax all property even including notes, bonds and the like, belonging to non-residents when they have acquired what is deemed an independent situs in the state. The only limitation upon this comprehensive power which is incident to sovereignty over the persons domiciled, the business conducted, and the property located within the jurisdiction, is that this does not extend to tangible personal property any more

than it does to real estate which is located within the jurisdiction of another state. This limitation was declared by the supreme court in *Union Refrigerator Transit Co. v. Kentucky*, 199 U. S. 194, but the court said that this case did not involve the question of taxation of intangible personal property or of inheritance or succession taxes which are controlled by different considerations.

A familiar case of double taxation resulting from the ignoring of interstate comity is that of shares of stock or bonds of a foreign corporation, or bonds of another state which are assets in the hands of a citizen taxable by the state wherein he is domiciled. Such securities are taxable as a rule, not because they are specifically mentioned in the tax law, but because they are included in the property which the individual citizen is required by law to return for taxation. Some states specifically require the enumeration of such property. This ignoring of interstate comity in the taxation of corporate and other securities is the more to be deplored as the commercial relations of our people are not controlled by state lines, and corporate securities both stocks and bonds are freely invested in by our people irrespective of whether the corporation is organized under the laws of the same state or not. Comparatively few of our states have sought to base this question of the taxation of corporate and other securities upon sound, economic and just principles not limited to state lines. Some states have recognized a retaliatory principle in their tax legislation by providing for the exemption of resident stockholders as to their holdings of the stock of non-resident corporations, when the laws of the state of the incorporation provided a like exemption for those domiciled in that state.

In *Kidd v. Alabama*, 188 U. S. 730, it was said that:

No doubt it would be of great advantage to the country and to the individual states if principles of taxation could be agreed upon which did not conflict with the others, and a common scheme could be adopted by which taxation of substantially the same property in two jurisdictions could be avoided, but the constitution of the United States did not go so far, and a state was not bound to make its laws harmonious in principles with those of other states.

The consequences of this general disregard of interstate comity in taxation are very much controlled by the now generally recognized ineffectiveness of the system of general property taxation, so far as the taxation of intangible property, interstate as well as

state, is concerned, where it rests entirely upon disclosure by the individual tax payer of his securities. Statutes subjecting intangible property, such as stocks, bonds, and other evidences of indebtedness, to taxation, have been found essentially unenforceable, as it is practically impossible to enforce from tax payers the disclosure for taxation of such property located or secured in other jurisdictions.

There is another form of double taxation through the ignoring of interstate comity which is not capable of evasion, and that is in the state inheritance tax laws. A state may not only impose a tax upon an inheritance of property of decedents domiciled in such state, but may also tax the property located in its territory, which passes under the inheritance law of any other state. The decedent may have been domiciled in one state, and his property may be located in another, or he may own stock in a corporation of another state, while the heir, legatee or devisee may live in a third jurisdiction.

It was directly ruled by the supreme court in *Blackstone v. Miller*, 188 U. S. 189, that interstate comity was not enforced by the federal Constitution to prevent duplicate taxation under inheritance tax laws of different states upon the same estate. Thus, in this case it was held that the imposition of a tax under the New York inheritance tax law on the transfer, under the will of a citizen of Illinois, of debts due the deceased by residents of that state, did not violate the fourteenth amendment, although the entire estate was taxable in the state of Illinois.

The supreme court of New York said in such a case that:

"It was unfortunate that the laws of the different states relating to succession taxation were not uniform and framed to prevent double taxation."

This subject was carefully considered by the National Conference on Taxation, held at Buffalo, New York, May 23, 1901, under the auspices of the National Civic Federation, attended by representatives both economists and men of large practical experience in taxation appointed by governors of some thirty states. The conference unanimously adopted the following resolution, after full discussion, as expressive of its views:

WHEREAS, Modern industry has overstepped the bounds of any one state, and commercial interests are no longer confined to merely local interests, and,

WHEREAS, The problem of just taxation cannot be solved without considering the mutual relations of contiguous states, be it

Resolved, That this conference recommend to the states the recognition and enforcement of the principles of interstate comity in taxation. These principles require that the same property should not be taxed at the same time by two state jurisdictions, and to this end that if the title deeds or other paper evidences of the ownership of property, or of an interest in property are taxed, they shall be taxed at the situs of the property, and not elsewhere. These principles should also be applied to any tax upon the transfer of property in expectation of death, or by will, or under the laws regulating the distribution of property in case of intestacy.

Not only interstate but international comity is required under modern conditions to protect the taxpayer from double taxation. The world is growing smaller and investments are limited neither by state nor national boundaries. In a suit brought by a California bank to recover taxes alleged to have been illegally levied, the supreme court said (104 U. S. 111) that all subjects over which the jurisdiction of the state extends are objects of taxation. The court said that it assumed that the foreign investments of the bank were such as were usual in a bank's business and had their legal situs at its domicile; but the court did not consider what would be the rule, if the investments were in fixed property subject exclusively to another jurisdiction.

Double taxation of the same property to the same owner, whether resulting from a disregard of interstate or international comity, is alike repugnant to economic justice, and is condemned by the universal law of mankind, the *jus gentium* of the civilians, which was said to be common to all nations, because resting on the nature of things, and the general sense of equity which obtains among all men.

THE CENTRAL CONTROL OF THE VALUATION OF TAXABLE SUBJECTS

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It is more than a century and a quarter ago that Alexander Hamilton said in substance that no part of the administration of government requires for its proper management such extensive information and so complete a knowledge of the principles of political economy as the business of taxation.

The proposition then announced by Hamilton has since been repeatedly affirmed by others, and as the years have passed has come more and more to be recognized by students and well informed executives as a truth which should be impressed upon tax laws, and should also characterize the administration of revenue systems if all citizens are to be treated before the law in a relatively equal manner.

But while those who by reason of study or administrative effort are in close touch with the question and are unanimously agreed to the proposition, the public upon whom the burden of the tax rests is generally unresponsive or directly antagonistic to suggestions of students or experts or experienced administrators for the construction of revenue systems of the kind needed to place this branch of the public service upon the same plane of efficiency that private business in general occupies.

Whether this attitude of the public comes from inertia, lack of information, or other source, the result is the perpetuation of the loose and haphazard ways of laying taxes that have grown up in many jurisdictions.

The bottom fact of the proposition is that taxation is a business, and as such requires in its conduct the most highly developed methods that can possibly result from the combined knowledge of the student and the administrator.

Hamilton's influence in forming the federal system was great and has been lasting; but the system has often been changed more or less by partisan desires and action, and is not the product of the disinterested wisdom of experts. For example, only recently the

movement previously inaugurated to investigate upon non-partisan lines certain phases of the system has been checked and probably defeated; certainly for the time being.

The formation of the revenue systems of many of the states has not seemed to follow intelligent design. The systems have been built largely piece-meal; have been guided in growth sometimes by legislative thoughts of expediency, at other times by popular demands for changes in revenue measures inspired by the wiles of the demagogue who too often speculates upon the credulity of the uninformed; and at still other times by those able to influence legislation for their own selfish purposes.

Until comparatively recently, administration of many branches of public business in the states has proceeded quite independently of expert or scientific knowledge, but within the past two or three decades many states have realized the benefits which have come to other governments through the employment of experts in the various lines of service and are taking over approved methods in order to have like benefits within their own jurisdictions.

There is need of an educative movement so that the people may come to realize that there is in the land a great body of intelligent, able and high-minded students who by careful inquiry into past experiences of the race have become qualified to propose measures to law-making bodies which if placed on the statute books will greatly promote social welfare; and it should also become commonly known that large numbers of public servants in the various branches of service are earnestly seeking ways to improve the law and its administration so that the benefits of government shall be enjoyed by citizens and its burdens borne by them in a relatively equal manner.

In keeping with the modern centralization of productive energies, there has been a centralization, though in much less degree, of governmental activities, much the larger part of the movement having occurred within the past one or two decades.

Real equality in laying taxes upon property requires relatively equal assessments of all property in a given assessment district, for within the district the rate of tax for district purposes must be uniform.

Some districts are a complex whole constituted by smaller districts as units, and may themselves be units in the formation of a still larger district. Ordinarily, a school district is the smallest area

in which a particular tax rate is applicable; but school districts are seldom assessment districts; in combination with other like districts having different rates of levy for school purposes they form the township assessment district.

The township district tax rate varies among the township districts, and all such districts unite with city districts to form the county assessment district. The rates of tax vary among the county districts, but are uniform over their respective areas and the county districts are units in the formation of the state assessment district where the state tax rate applies to all property uniformly.

Thus the unit assessment district least in area may be the township or the county. Under the township plan, values for county purposes are fixed according to the varying opinions of numerous assessors who are seldom chosen because qualified for the work. Under the county plan, one judgment fixes all values, and it hardly needs saying that uniformity in assessment is here possible while it is impossible under the other plan.

Boards of equalization are functionaries common to the states, and as the name implies are designed to remove inequalities in the assessment. Experience shows that such boards are not able to furnish all the remedies provided by law. They lack a knowledge of the conditions which surround individual taxpayers, and do not have the time during the assessment period within which to acquire the information necessary to advise them as to the condition of all taxpayers in their respective jurisdictions, and this knowledge is a prerequisite to a removal of inequalities which may occur in the local assessment. Individuals who complain in legal form may have relief, but those who lack the information of how to proceed to obtain relief and those who discover their grievances too late to apply for it, must go without a remedy.

It follows that equality in the original assessment is the indispensable condition to a real equality in laying taxes, and that the larger the area covered by one assessing power the greater will be the uniformity of valuation among taxpayers.

Logically the centralization of the actual work of assessment should be with the authorities of the state district so long as the state tax levy is laid upon all property in the state; but the great burden of taxation arises from local tax rates and a centralization of the assessment work in the county authorities with a directory and super-

visory control by the state will afford a method both practicable and expedient, and therefore suitable to achieve the desired end.

Ideal centralization involves the control of the machinery of assessment, and this means of course appointive instead of elective assessors. In no other way than by appointment is it possible to select assessors because of their qualifications and to continue them under civil service rules so long as they prove to be efficient. Centralization is thus necessary for general tax purposes, and the prevalent emphatic movement toward centralization affirms its desirability and expediency.

However, the unsatisfactory results attending the assessment of certain forms of corporate property by a divided responsibility first led to centralization. It was quite early in the history of these corporations found to be utterly impracticable to assign to numerous persons the valuation of parts of a railroad, a telegraph or a telephone line situated in the different districts through which the railroad or the other lines were constructed, and soon it became the policy to create state boards to assess this class of property. The property of such corporations being usually public service corporations and subject to local tax rates, justice required that it be assessed in a relatively equal manner with local property, but this proved to be a difficult proposition because the railroad or other line was assessed by one authority at a uniform value in all the districts through which it passed, while local property as valued by the local authorities varied greatly in the different districts from the uniform value of the railroad or other line. Because of the resulting wide variation from a single standard of valuation there arose inevitably the need of a central authority to place all property upon the same basis of actual value, and state boards of equalization, tax commissions or other central bodies were a natural growth.

In 1842 there came a degree of centralization in New Hampshire, and in after years more or less centralization occurred in other states: in Indiana, in 1851; Massachusetts, 1865; Dakota, 1868; Kansas, 1869; Missouri, 1871; Illinois and Iowa, 1872; Arkansas, 1878; California and Wyoming, 1879; New York, 1880; Vermont, 1882; New Jersey, 1884; North Dakota, South Dakota and Washington, 1890; Rhode Island, 1898; Wisconsin, 1901; Nevada, 1903; Oregon, 1909; Ohio, 1910.

The method was first developed largely in connection with the

assessment of public service corporations operated interstate or inter-county, but gradually the central bodies were reformed and given additional powers tending to the control of general assessments.

Important powers lodged with permanent tax commissions or with bodies having analogous duties to perform are the following:

The administration of oaths in all matters concerning proceedings in connection with the discharge of official duties.

The formulation and promulgation of a uniform method of keeping tax rolls and other records relating to taxation, for use in all counties of the state.

The formulation and promulgation for use in the several counties of all forms necessary in the listing, assessment and return of property and collection of taxes.

Power to exercise a general supervision over and to direct county assessors in the performance of their duties.

Authority to investigate generally the condition of the system of taxation throughout the state in order to report to the legislature needed changes in the system designed to promote a general equality of taxation.

The power to require local officers having to do with assessment and the collection of taxes or the disbursement of public funds to report in such form as the central body may require, information bearing upon any investigation being made; and in such investigation to call upon individuals and corporations for information bearing upon the subject of taxation; to examine books and papers; summon witnesses to appear and testify and to produce books and papers before it at a time and place to be appointed by it.

Authority to prescribe all needful rules not inconsistent with law for the orderly, methodical, and effective performance of its duties as a board of assessment or otherwise, and for conducting hearings and other proceedings before it.

Authority to exercise a general supervision over the administration of the assessment and tax laws of the state, over the township and city assessors, boards of county commissioners, county boards of equalization and all other boards of levy and assessment to the end that all assessments of property, real, personal and mixed, be made relatively just and uniform.

Power to confer with, advise and direct assessors, boards of commissioners, boards of equalization, and others obligated under the

law to make levies and assessments as to their duty under the statutes.

Power to direct proceedings, actions and prosecutions to be instituted to enforce laws relating to penalties, liabilities, and the punishment of public officers, persons and officers or agents of corporations for failure or neglect to comply with the orders of the central authority or with the provisions of law governing the return, assessment and taxation of property; and to cause complaints to be made against assessors, county commissioners, county boards of equalization, or other assessing or taxing officers in the courts of proper jurisdiction for the removal from office for official misconduct or neglect of duty.

Power to call upon the attorney general of the state, or the county attorney of the respective counties to assist in the commencement and prosecution of actions and proceedings for penalties, forfeitures, removals and punishments for failure to observe the tax laws of the state.

Power to require township, city, county, state or other public officers to report generally upon matters of taxation, and particularly to make and prosecute research and investigation concerning the detailed properties of corporations, the business, income, reasonable expenditures and true values of the franchises and properties of all public service corporations doing business in the state.

Power to summon witnesses from any part of the state to appear and give testimony and to compel such witnesses to produce records, books, papers and documents.

Authority to cause the depositions of witnesses residing within or without the state or absent therefrom to be taken in accordance with the customary practice in taking depositions.

Power to make appraisal and assessment of the property of all public service corporations which are not confined to the limits of a single county.

Power to require any county board of equalization at any time after its adjournment to reconvene and to make such orders as shall be determined to be just and necessary, and to direct and order such county boards of equalization to raise or lower the valuation of the property, real or personal, in any township or city, and to raise or lower the valuation of the property of any company or corporation; and to order and direct any county board of equalization to raise

or lower the valuation of any class or classes of property, and generally to do and perform any act or to make any order or direction to any county board of equalization or any local assessor which may seem just and necessary in order that all property shall be valued and assessed in the same manner and to the same extent as any and all other property, real or personal, which is required to be listed for taxation.

Power to prosecute any member of any board of county commissioners and any assessor for violation of any of the rules and regulations which may be prescribed by the central body, or the violation of any statute of the state relating to assessment of property and the collection of taxes.

Power to prescribe a list of questions to be answered by taxpayers or other persons.

Power to sit as a state board of equalization and to equalize the assessment of property throughout the state; to equalize the assessment of all property in the state among persons, firms or corporations of the same assessment district, among cities and townships of the same county, and among the different counties of the state, and the property assessed by the said central body in the first instance; the equalized value so fixed to be adopted as the assessment roll for the extension of all tax rates, state and local.

Power to order a reassessment of all or any part of the property assessed by the local authorities in any given assessment district; such assessment to be made by assessors appointed by the central body and the assessment to be made at the expense of the district so reassessed.

Power to remove county assessors for dereliction in duty and to approve of the removal by the county assessor of deputy assessors.

All of the above powers—and others of less importance not mentioned—have been given to one or more permanently organized central bodies, and are illustrative of the modern tendency to organize the business of taxation upon lines of efficiency.

The responsibility thus placed with some of the central bodies is very great, and calls for a large knowledge and a wise discretion in the performance of duty. Power, and an inclination to its full use, usually go hand in hand. Careful deliberation before the exercise of authority is very important, and it will be found many times that power held latent but ready for use will be fully as effective for good as if it were exerted.

One form of centralization is yet to come, and this will be in relation to corporations operating transportation and transmission lines interstate. There is at least as much justification for a centralized assessment of the property of these corporations as there is for a central assessment of like property of lines crossing several districts within a given state. In fact, such centralization would seem to be more needed because under the irresponsible divided system now obtaining there is a tendency on the part of states to reach out and import values pertaining to property of public service corporations operating interstate. Just how this centralization will come is a matter of speculation. The power of assessment may be lodged in a body raised by Congress, or the central body may be appointed jointly by the states interested, under some federal law of control, with proper provision for a division of the value of the property of particular lines of transportation or transmission among the states through which the lines are built.

The revenue systems of the states are so diversified, and the duties required of central boards are so many and varied that classification of the boards is very difficult.

An interesting classification of central boards that are charged with the duty of corporate assessments in one form or another may be found in Part V of the valuable report of the federal commissioner of corporations on the taxation of corporations, made to the department of commerce.

In the first class are included wholly *ex officio* boards or officers, and these exist in New York, Pennsylvania, Delaware, North Dakota, Iowa, Nebraska, Missouri, Montana, Idaho, Wyoming and New Mexico. (Since the report a permanent tax commission has been created in North Dakota.)

In the second class are the boards, one or more members of which are *ex officio* and the remaining members are specially chosen either by election or appointment. The boards of this class are found in Connecticut, Indiana, Illinois, Michigan, Oregon and California.

The central authorities not classed as above indicated have memberships wholly selective and are in the following states: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, New York, New Jersey, Maryland, Ohio, Wisconsin, Minnesota, North Dakota, South Dakota, Kansas, Colorado, Utah, Nevada, Washington and Arizona.

Boards or officers having central authority are variously named as follows: comptroller, auditor general, state treasurer, state auditor, secretary of state, state board of equalization, state executive council, state board of equalization and assessment, tax commission, state board of tax commissioners, state board of assessors, state board of appraisers, commissioner of taxes, etc.

The classification mentioned above was prepared by the commissioner of corporations with relation only to the central assessment of corporate property. To harmonize with what is here said a different arrangement is needed. The nomenclature of the central authorities is so varied that one or another name must be selected to designate a class of which the members may be variously styled. A consideration of the functions of the central authorities naturally suggests a three-fold classification, i.e.:

I Authorities that are charged only with the assessment of corporate property or the determination of the amount of tax due from certain corporations.

II Those that have not only the duties of the first class to discharge but in addition are required in some degree to equalize assessments in general.

III Those that perform not only the same duties that are imposed upon members of classes I and II, but are required also to exercise a directory or supervisory control of the work of local assessors.

Class III is under consideration in the preparation of this paper, and its members may be generally designated as "permanent tax commissions."

Among the individuals of the class, centralization is more or less differentiated. The Indiana commission was the first body to be granted what may be called extraordinary powers, and as the other states have since created similar commissions in rapid succession, the policy has been to give added powers until in a few jurisdictions the commissions have practically all the authority that is needed.

As the benefits of centralization have been perceived there has resulted also increased powers to the earlier created bodies. The only thing which tends to check the movement towards centralization is the separation of the sources of state and local revenue. In states where this system has been provided, the tendency is naturally away from centralization except as to the assessment of property which provides the state with revenue.

States which have members of class III appear in the following statement in chronological order of creation, as near as could be ascertained; and also there are given the dates when the commissions were organized, so far as such information is available.

States	Date of Law	Date of organization
Maine.....	March 26, 1891	1891
Massachusetts.....	1891	1891
Indiana.....	1891	1891
New York.....	1896	1896
Michigan.....	1899	1899
Wisconsin.....	April 19, 1899	June 7, 1899
Connecticut.....	1901	July 1, 1901
North Carolina.....	1901	1901
West Virginia.....	Aug. 11, 1904	Nov. 28, 1904
New Jersey.....	March 29, 1905	April 3, 1905
Texas.....	April 17, 1905	Aug. 13, 1905
Washington.....	1905	1905
Alabama.....	1907	1907
Kansas.....	March 7, 1907	July 1, 1907
Minnesota.....	April 25, 1907	April 27, 1907
Arkansas.....	May 12, 1909	May 18, 1909
Oregon.....	1909	1909
Wyoming.....	1909	1909
Ohio.....	May 10, 1910	July 1, 1910
New Hampshire.....	April 15, 1911	May 1, 1911
North Dakota.....	1911	July 1, 1912
Colorado.....	June 2, 1911	May 20, 1912
Rhode Island.....	Feb. 15, 1912	Feb. 20, 1912
Arizona.....	May 12, 1912	May 18, 1912
Georgia.....	1913	1913
Maryland.....	1913	1913
Nevada.....	1913	1913
Montana.....	Feb. 1913	April 1, 1913
South Dakota.....	Feb. 13, 1913	Feb. 26, 1913
Idaho.....	March 13, 1913	May 13, 1913
Florida.....	June 7, 1913	July 10, 1913
Vermont.....	no data	no data

In Wisconsin an income tax has largely replaced the personal property tax, and the tax commission appoints all assessors of incomes. In Ohio, deputy state tax commissioners are appointed by the governor, and are subject to removal by the tax commission with the consent of the governor. Deputy assessors are appointed by the deputy state tax commissioners, but all are under the absolute control of

the tax commission. The Ohio commission is among the latest creations, and as the result of the benefits of centralization observed in other states, has been assigned nearly all the powers that have been devised to give full centralized control of assessments.

In a few other states the commissions have power to appoint assessors, but this ideal power has not yet been extensively bestowed. Efficiency in this branch of the public service will certainly be sooner realized under an appointive assessor system than where such officers are elective. Under the first plan they can be chosen because of their qualifications and can be retained so long as they efficiently and honestly serve the public. Under the elective system the choice is a sort of "hit or miss" selection. Rarely will a qualified officer be chosen in this way. As a rule qualifications for special work receive little consideration at the polls.

In conclusion some of the results of the work of commissions are as follow:

Arizona: Organized 1912, but three weeks thereafter the assessment rolls were closed and but little could be done that year. The commission re-wrote the entire revenue laws of the state and removed inequalities. The bills prepared became laws. An investigation showed that there was great inequality in the distribution of the tax burden, and resulting action increased the revenue from mines from 19 per cent of the total tax previous to the organization of the commission to 37 $\frac{2}{10}$ per cent of the total tax in the first full year of the commission's work, and the revenue from railroads from 12 per cent of the total to 22 $\frac{3}{10}$ per cent.

A careful system of checking in regard to stock shipments resulted in a large number of animals being placed upon the roll that had previously escaped taxation. Pursuant to a law written by the commission and enacted by the legislature, the state revenue will be increased in 1914 to the amount of \$18,000 from a source never before taxed, *i.e.*, the property of private car companies. A careful equalization of all property in the state has already brought about a more equitable distribution of the tax burden. In 1911 the total taxable valuation of the state was \$98,000,000 and through the work of the commission the total in 1914 will approximate \$408,000,000.

Arkansas: The endeavor of the commission has been to have the property in the state assessed at approximately fifty per cent of its full value. An investigation caused the commission to conclude that the property of utilities, the assessment of which was to be made by the commission, had previously been assessed at about 30 per cent of its value; by the assessment of the commission it is now valued at from 45 per cent to 50 per cent of full value. In 1908 it was assessed at \$51,000,000, and the latest assessment by the commission was a little over \$90,000,000.

In like manner the commission raised the valuation of telephone and pipe line companies from 20 per cent of full value to 50 per cent of the same. The original assessment at a million dollars has been increased to three million. Other public service corporations which were in 1908 assessed at two millions were in 1913 assessed at something in excess of six millions of dollars. All property now assessed by the commission was valued in 1908 at \$55,000,000; the commission value in 1914 is a little in excess of \$102,000,000. The result is more real equality in the distribution of the tax burden.

This commission lacks power of equalizing assessments between individual taxpayers, and as the variation from true value is all the way from 5 per cent to 100 per cent great inequality exists which the commission cannot as yet remedy, but is looking for a more elastic and equitable law at the hands of the legislature which will permit the removal of the inequalities now existing. The commission administers the corporation franchise tax. The commission drafted and submitted to the legislature in 1911 a law providing a franchise tax to be paid by corporations on that part of their capital stock employed in Arkansas. The tax is $\frac{1}{15}$ th of one per cent. Under the old law the revenue from this tax was about \$65,000; under the new law the amount received is \$180,000.

Colorado: Through the work of this commission for the first time in the history of Colorado the law has been enforced which requires property to be assessed at full value. Correspondingly, the tax rate has been reduced from over 40 mills to $13\frac{7}{10}$ mills. In 1913 for the first time there was something like a fair equalization of value among the sixty-three counties. Under the supervision of the commission the county assessors have made a more full and complete listing and valuation of local property. As the result of the work of the commission, co-operating with county assessors and county boards of equalization, the tax burden is more equitably distributed among the different classes of property than ever before.

An instance of an equitable shifting of the tax burden is the following: agricultural lands and improvements have been increased nearly \$50,000,000; metalliferous mining property has been increased \$28,000,000, while town and city lots and improvements have been reduced \$65,000,000. Local public utilities formerly assessed by county assessors at \$16,000,000 in round figures were assessed by the commission in 1914 at \$68,000,000. The larger public service corporations, such as railroads, etc., under the old law were assessed at approximately \$60,000,000, and for the year 1914 by the commission at \$195,000,000.

Before the creation of the commission the tendency on the part of the county assessors was to so act in assessing as to shirk the state tax, there being a great rivalry among the county assessors in this particular, and as a result the state had become practically bankrupt. The constitutional limit of state tax is four mills, and as the result of the commission's efforts is now only one and three-tenths mills. The effect is to put the state upon a sound financial basis.

The commission has drafted and secured the enactment of several effective revenue measures. There has been a general toning up in the administration of the assessment laws and in the collection of taxes.

Connecticut: In this state there is only one officer, the tax commissioner, who first took office July 1, 1901. In this state there is separation of the sources of state and local revenue. Under the administration of the commissioner the assessment of buildings and land has been separated. Pursuant to his recommendation the terms of offices of the assessors have been lengthened to three and four years, thus giving the municipalities the benefit of experienced assessors. The educative work performed by the commissioner has produced meetings of assessors, boards of revenue and tax collectors, at which meetings the laws in relation to the duties of each of these classes of officers and methods of administration have been discussed, and the result is that now there are two associations of tax officials which hold annual meetings and have definite programs of speakers. The whole result is educational and is causing the public to take notice of tax matters.

Pursuant to the recommendations of the commissioner, there have been a number of changes in the tax laws of the state whereby the public interest has been promoted. The law in relation to the taxation of forest lands now provides a nominal tax on the value of the land during the period of growth, and a yield tax at the time the timber is cut. Pursuant to the recommendations of a special commission, of which the commissioner was a member, the legislature has changed the law in relation to the assessment of telephone and telegraph companies. The former system of taxing physical properties of the kind has been replaced by a gross earnings tax which yields a larger revenue to the state without unjustly burdening the companies. Another change in the law has abolished the taxation of inheritances of non-resident decedents so far as personal property is concerned.

This commissioner, in so far as his authority extends, has been intelligently active with the result that in many ways the public has been benefited.

Florida: This commission is new, the date of organization being July 10, 1913. As yet it has had little opportunity to produce results. The aim of the commission is to get all property in the state assessed upon a basis of full cash value as the law requires, but it has found that such result will be inexpedient for the present year, 1914, and is operating with the fifty county assessors of the state to get all property assessed upon a basis of fifty per cent of actual value. In succeeding years full value will be the aim. Upon the fifty per cent basis of value the aggregate assessment has been increased from \$234,000,000 in the previous year to \$295,000,000 in 1914; and correspondingly the state tax levy has been reduced from $7\frac{1}{2}$ mills to $5\frac{1}{2}$ mills. Some effort has been made to equalize values of property among counties and also in some instances the property of a particular kind in single counties. The educational effect of the commission's work is apparent in the fact that the public begins to realize the importance and necessity of a centralized assessment.

Idaho: This is also a new commission, its organization having been made on May 13, 1913. Consequently, it has had but little time within which to produce results. Among the achievements is an estimated amount of \$150,000 in taxes saved through the enforcement of the law regarding the collection of unsecured personal property taxes at the time of assessment. The assessment of public utilities after a careful investigation has been increased several mil-

lions of dollars for the purpose of more equally distributing the burden of taxation among the different property owners. A vigorous enforcement of the inheritance tax law has resulted in the collection of a considerable amount of delinquent inheritance or transfer taxes.

Kansas: The first assessment of all property in the state under the control of the commission was in 1908. Total assessment \$2,451,560,397. The total assessment of the previous year under the old plan, \$425,281,214. Average rate of levy for all purposes in the state 1907, .0469638; average rate of levy for all purposes in the state 1908, .0086548. Average state levy 1907, old plan, .006; average state levy 1908, .0009. The sixth assessment under the control of the commission produced an aggregate of \$2,809,801,434, and average rates for state .0012; for all purposes .01048995. The rates it will be observed have not been correspondingly reduced with the increase in valuation, but this is accounted for by the fact that public expenditures in 1913 exceeded those of 1907 by the sum of \$8,985,780. In the assessment under the new plan, property has been brought practically to actual value, and the increase in various kinds of property ranges from 300 per cent to 1,000 per cent. Thus property is brought upon an equal plane of assessment.

One important result under the new plan is that the practice of under-assessing valuable properties relatively with less desirable and less valuable properties has been to a great extent eliminated. The educational work of the commission with the local officers has elevated the standard of work and has substituted for a desire under the old plan to under-assess, an earnest effort to actually assess property at its full value.

Another result has been to get upon the tax roll personal property in excess of \$300,000,000 never before taxed.

At the instance of the commission, many important amendments have been made to the statutes tending to cause a more equal distribution of the tax burden.

The commission drafted a legacies and successions tax bill, and secured its enactment in 1909, the provisions of which administered by the commission brought to the general revenue of the state approximately \$200,000 per annum. This law after four years of successful operation was in 1913, as the result of partisan politics, repealed absolutely.

A law written by the commission and enacted by the legislature doubled the revenue derived from express companies.

Another law proposed by the commission more than doubled the revenue received from private car companies.

All increases in revenue produced through the work of the commission tend only to equalize the distribution of the tax, and do not unjustly burden the sources of the revenue. The commission has large powers, but has refrained from exercising extreme power except in a few cases of emergency. Its power to remove assessors has only once been exercised and that indirectly by suggesting a resignation; it has several times approved the removal of deputy assessors by the county assessor. The power to reassess districts has been exercised several times, always with good results. In such cases the assessors are appointed by the commission.

Massachusetts: In this state there is only one officer possessing the central authority, the tax commissioner. The department was created in 1891, and since that time there have been but two incumbents of the office. The term of the first commissioner expired by reason of his death in 1899, and the present commissioner has since been in office.

Under this commissioner the taxation of corporations has been made uniform so far as the laws are uniform. The revenue of the commonwealth has been increased. Local assessments have been considerably equalized and the procedure of local boards has been made uniform. The administration of the inheritance tax law has been made even and searching. The chief reason probably for the good which this commissioner has been able to accomplish has been his freedom from molestation on account of partisan politics.

Michigan: The chief benefit from the work of this commission has been in placing upon the assessment rolls a large amount of property which had formerly entirely escaped taxation, and by the exercise of its powers of review of assessments, the correction of innumerable inequalities in individual assessments. During the past three years twenty counties have been completely reassessed by the commission and property placed upon the rolls at its true cash value as required by the constitution and the laws of the state. This procedure was made necessary by the manifest inequalities between individual assessments resulting from the inefficiency of local workers. The commission instituted probably the first searching investigation as to the proper basis for the assessment of the property of transportation companies.

Minnesota: The work of this commission has been very effective and has resulted in the following benefits to the public.

A classified assessment law by means of which in the year 1914 there is the first full and fair assessment of property that has been made in the state in fifty years.

A complete system of assessing mines and mineral property which in operation has increased through the work of the commission the valuation of such property from \$64,000,000 in round numbers to \$260,000,000.

An increase in the gross earnings tax on railroads from 4 per cent to 5 per cent, the net increased revenue from such property being 25 per cent.

The enactment of a comprehensive and very satisfactory graduated and progressive inheritance tax law, yielding large sums to the state.

Upon the recommendation of the commission the legislature enacted a three mill "money and credits" tax law, as the result of which the revenue from such property has been very materially increased.

Also it has caused the enactment of five per cent gross earnings tax on sleeping car companies, as the result of which the revenue from such companies has been doubled in two years.

Has recommended and procured the passage of a very satisfactory mortgage registry tax law.

It will be observed that this commission has accomplished a great deal. It is in the front rank of working commissions.

Montana: Organized April 1, 1913, so that there has been but little time for results. The powers of this commission are advisory only, but the com-

mission has already done some effective work towards the removal of inequalities in assessments. Much property previously under-assessed has been brought nearer to equality with other property. Has procured the assessment as property, of reserved mineral rights. Has studied the systems and laws of other states carefully, and will recommend constitutional changes permitting classification and effective equalization.

New Hampshire: Organized May 1, 1911. Through the work of this commission many property units, corporations, etc., have been increased in valuation for tax purposes from 100 per cent to 300 per cent. Property valuations as a whole have been increased nearly fifty per cent; the tax rate has been lowered; the general equalization of assessments has brought all property in the state to the basis of actual value.

New Jersey: The board of equalization of taxes is the name of this board, and in 1905 it succeeded the state board of taxation, which had been in existence since 1891. The board is an appellate board and grants remedies to appellants from the action of the local authorities, and has done much of this kind of work. Equalization of all property in the state through co-operation with local authorities has been one of the principal results.

New York: This commission dates from 1896. Particular attention has been given to the enforcement of the special franchises tax law, and the assessment of property thereunder, and to the organization of local assessors, and extending aid to them in order to place upon the assessment rolls all taxable personal property; and also to obtain a more equitable and just assessment of real property and a just and equitable equalization of assessment among the towns and counties of the state. Numerous achievements have resulted, enumeration of which is prevented by lack of space.

North Dakota: This commission is new, dating only from July 1, 1912, but has been busily at work and the results are indicative of increased results as the work of the commission progresses. The getting upon the assessment rolls of much property which escaped before the organization of the commission has had attention, and two items of about sixteen millions each of such escaped property is added, and besides these two items eight or nine millions of similar items. The revenue derived from this heretofore omitted property is estimated at \$500,000. The laws of this state do not permit the assessment of property at full value, and an attempt to get the law amended in that particular failed because of the veto of the governor. At the instance of the commission the legislature passed an inheritance tax law which is being administered by the commission. This commission has been very busy with the multitude of duties which necessarily come up in administering tax laws, through hearings, investigations, etc. The duty of equalization is placed elsewhere, but the commission makes recommendations to the state board of equalization.

It is impossible to detail briefly all the accomplishments of an active commission, and this one shows activity, and when it has a little longer life will undoubtedly have accomplished much for the public benefit.

South Dakota: This is one of the newest commissions, having been organized in 1913. The results of its work are:

(1) An educational movement which is causing people to take active and intelligent interest in matters of taxation.

(2) Assessed valuations have been brought up from 25 per cent or less to approximately full value as required by the constitution.

(3) Better equalization from townships to state as a whole, due to equalization according to schedule of valuations for all classes of property.

(4) The commission has recommended the codification of revenue laws, including county assessor plan, and will also recommend submission of six constitution amendments to be voted upon in 1916.

For a new commission it seems to have been busy.

Ohio: Since the organization of this commission in 1910 its accomplishments have been many, too numerous for detailed mention. The most salient thing is the increase in property valuations. Data for 1910 before, and for 1913 after the commission commenced its work given below indicate the increase:

	1910	1913
Value of realty.....	\$1,656,944,631	\$4,418,953,299
Value of personalty.....	827,370,943	2,300,115,670

Rhode Island: The work of this commission dates from February 20, 1912. A valuable educational movement was started by the commission in the organization of a state tax officials' association which meets twice a year. The quite apparent results are a more thorough understanding of tax laws and better assessments and valuations. In many other ways the commission seeks to advise the public upon matters of taxation. Large amounts of intangible property which always escaped taxation, through the efforts of the commission are now bearing a share of the tax burden. Relatively, the tax burden is much more equal than under the old system. Tax lists have been standardized and also the call for financial town meetings and the votes by which the levy is made. Like all active commissions it is doing much good which cannot be stated in detail.

Texas: This commission has slight control over local assessing officers as its power is only advisory. Its accomplishment has been chiefly in getting upon the tax roll the intangible assets of corporations through its own direct valuations and through co-operation with local valuers of property.

Wisconsin: No commission has been more active or has accomplished more than the Wisconsin commission which was the first commission to be given the extraordinary powers before mentioned; in fact, the law of Wisconsin and the work of its commission have been a guide in the reformation of tax systems in other states. It has been able to accomplish more than most other commissions because the legislature of Wisconsin has been liberal in its appropriations, and has given the commission facilities for the gathering of statistical data and expert study of all questions concerning taxation, which privilege has been denied to most other states. It is difficult to briefly summarize the work of the commission, but some of its work and recommendations are as follows:

A change from the gross receipts tax upon railroads to the assessment of railroad property on the advalorem basis, with the application of the average

rate of the general property of the state. An exhaustive investigation into the value of this class of property was made. Later the advalorem system was extended to the property of street railway and telegraph companies.

Pursuant to the recommendation of the commission many beneficial changes in the tax laws have been made by the legislature, and among other enactments have been laws providing for tax on inheritances and an income tax, both of which laws are administered by the commission.

Wisconsin has pioneered the way in many reforms, but the most distinctive perhaps is the replacement of a large part of personal property taxation by an income tax. This law is the first of its kind in the central western states, and is enforced by the commission in a manner never equalled before in the United States in the enforcement of income tax laws, which laws exist in several of the eastern states.

The brevity required here does not permit even a mention of many other accomplishments by this commission.

West Virginia: In this state there is no board, only a single officer whose commission was first issued November 28, 1904. The things accomplished are:

- (1) The assessment of property at a more uniform value.
- (2) A reduction in the tax rate of more than fifty per cent.
- (3) The installation of a uniform system of accounting of public funds, which has saved to the communities hundreds of thousands of dollars.
- (4) Has secured a more vigorous enforcement of the laws relating to license taxes, with the consequence that they are paid more promptly and practically everybody who is required under the law to pay such taxes now responds. Under the old system many persons escaped the payment of license taxes.

This commissioner enjoys the unique distinction of being also the commissioner of prohibition, and is charged with the enforcement of the prohibitory laws of the state.

The results above set forth indicate that the modern commissions which have power at all approaching their needs are busy and active bodies. Other states not included might be in the same class, but data for inclusion were not available. One noticeable trend in the work of the commissions is to increase the taxes of corporations and thereby to benefit other property. This inclination should not become effective except in cases where the burden of the tax has been relatively lighter upon the property of corporations than upon other property. The taxes of corporations should not be increased for political reasons, and always in adjusting taxes the probable incidence of the tax should have consideration. The consumers of a product, whether it be transportation, transmission or otherwise, will probably in the end bear a considerable part of the tax advanced by the corporation, and the question whether special classes of con-

sumers should be taxed for the benefit of the public will bear argument.

It should seem that this article would be incomplete without at least a brief reference to the work of the National Tax Association. The national tax conferences held annually under the auspices of the association have brought together scholars, experts, legislators and practical administrators of tax laws upon a common platform for the interchange of views, and the result has been a wonderful progress toward tax reform throughout the whole country. Congressional legislation has in some instances been molded through the direct work of the association or of its members. Constitutions in states have been amended as the result of the educational work of the association so that hard and fast rules which have not permitted a relatively equal distribution of the tax burden have been removed.

Uniformity among the states as regards tax legislation is very desirable, and the association is pioneering the movement, and it is reasonable to expect that the laws of the states will ultimately be molded so as to eliminate to a large extent the unsatisfactory double taxation that is now prevalent because of conflicting state laws. It would be well if all advocates of tax reform would become members and join actively in extending the influence of the association.

SEPARATION OF STATE AND LOCAL REVENUES

BY T. S. ADAMS,

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The history of American state finance in the last thirty years reveals two major movements, one against excessive uniformity, the other against excessive decentralization. It has been found on the one hand that a uniform rate of taxation cannot successfully be applied to all forms of property, and we have the irresistible movement for classification of taxes. It has been found on the other hand that inter-community enterprises or property cannot successfully be taxed by local officials, and we have the inevitable movement towards central assessment and the emergence of the state tax commission.

Surveying these movements, many students of taxation have essayed to project them into the future—always a necessary but a difficult and dangerous thing to do. These prognosticators have evolved as their ideal the separation of the sources of state and local revenues, which Professor Seligman would extend to cover the federal as well as the field of commonwealth finance. The tax whose base is broad is to be given to the superior jurisdiction; the tax whose base is narrow is to be used exclusively by the local jurisdictions. Concretely, in state finance the central government is to take over the tax on insurance companies, on railroads and similar enterprises carried on in all or nearly all parts of the state. The local governments are to be given for their exclusive use the general property tax, with an indefinite measure of home rule, so that they may abolish or modify the tax on personal property. The proposition apparently is that no tax shall be used in common but shall belong exclusively to the jurisdiction to which it has been assigned.

Much of this program is obviously sound and in strict accord with fundamental tendencies, the reality of which cannot be questioned. The only difficulty is to determine its proper limits. Some seven years ago at the first meeting of the National Tax Association¹ the writer suggested that this program, as it was then generally for-

¹ *State and Local Taxation, First National Conference under the Auspices of the National Tax Association*, vol. i, p. 514.

mulated, was extreme, and likely to result in as much harm as good, if not carefully guarded. And events since that time have apparently warranted the position then taken. Professor Seligman, for instance, a few years ago, expressed his approval of "a separation of state and local taxation, with local option on the part of the localities to tax or to exempt from taxation whatever classes of property they saw fit."² At the present time Professor Seligman approves of only a very narrow measure of home rule. Other advocates, who a few years ago endorsed the whole program of separation without modification, now suggest the retention of at least a small state tax on general property in order to avoid the danger of extravagance, which unquestionably accompanies the program. The chief danger, however, lies in the possibility that the reaction against the iron rule of uniformity under which most states have labored in the past, may prove excessive and extreme. The principal error of the "separatists," as the writer views it, lies in the proposal or implication utterly to divorce state and local tax jurisdictions.

That there is justice in the demand for some measure of local fiscal freedom, I would be the last to deny. It is now generally recognized that no tax is fit to be applied to all kinds of property and business. By the same token no tax is fit to be applied to all of the diverse territorial districts of the same state. In the average American commonwealth today we have every variety of social life from the city slum to the frontier. This is true even in some of the original thirteen states. We must have territorial classification for the same reason that we must classify the subjects of taxation. One way to establish such territorial classification is by carefully limited local home rule under such regulation that it cannot be abused. Thus the local governments could not safely be given the right to impose new taxes on business as they see fit. Business is now divided among so many jurisdictions that to give each the right to devise new methods of taxing it is merely to invite double and multiple taxation. But the various local districts might safely be given the right to exempt specified classes of personal property and even to select from a small number of specified local taxes, set aside for their potential use by the state legislature.

But the element of centralization is just as essential as the element of local autonomy, and much more necessary at the present

² *Political Science Quarterly*, vol. xxii, pp. 312-313.

time. This is particularly true with respect to tax administration. In no domain of public administration are distance, removal from local pressure and local political intrigue, so important as in tax administration. The strength of the assessor is as much increased by outside protection and control as it is weakened by lack of local knowledge. In short, we must have a mixture of local and central control in tax administration.

Many advocates of separation find their ideal in the present divorce of federal from state taxation. Federal taxation has its elements of strength because of this very divorce, but it has its elements of weakness as well, arising from the same origin; and federal taxation would be stronger if it were linked up more closely with state taxation. The administration of the federal inheritance tax during the Spanish War was woefully weak in many respects. Many estates subject to the tax escaped because of the lack of local knowledge. Merely to enforce a federal inheritance tax properly would require the federal government to duplicate administrative machinery which the state governments already possess. On the other hand, at the present time state inheritance taxation is suffering greatly from the lack of control by a superior and higher jurisdiction. All this illustrates the principal truth which it is desired to emphasize here, that the ideal is not separation but joint administration and control; that we could not divorce state and local taxation even if we tried, and we ought not even if we could. The central administration needs local knowledge. The local administration needs backing and control from the central body. Any other plan involves duplication of machinery and excessive cost of administration.

Let me illustrate: There is a widespread notion that the federal government controls interstate commerce and many court decisions have been rendered, which apparently prevent the state governments from taxing the earnings of interstate commerce. But the property of going business concerns, and its earnings, are inseparable. The same property to a successful business concern is worth more than to an unsuccessful business concern, and the state governments taking advantage of this truth have so imposed and defined their property taxes as to touch and tax earnings from interstate commerce. Again a state income tax on earnings derived from interstate commerce might be unconstitutional. But I do not see, under the rulings of the federal courts, how the states could be prevented

from using an excise tax or something akin thereto, measured by or with respect to earnings derived from interstate commerce. The proposition of exclusive jurisdictions fails. Joint and harmonious control is the only true solution.

Moreover, it may be denied in the most emphatic way that it is necessarily a bad thing for two jurisdictions to use the same tax. If the tax rate is already high, it may be unwise for another jurisdiction to clap on a sur-tax. And there are other circumstances in which it would be palpably unwise for two jurisdictions to use the same tax. But just as frequently it is a good thing for two branches of government to use the same basis of taxation. Local criticism helps the central authority to be efficient, and central criticism helps the local administrator to be effective. This is particularly true of the income tax. Central control is needed to prevent double taxation and to protect the fearless assessor; local knowledge is absolutely indispensable to prevent evasion. The federal income tax would be stronger if every state in the union had a state income tax, provided of course that the two administrations worked in harmony and that the aggregate rate were not excessive. The development of the income tax in Europe plainly proves this point. And anyone who has administered an income tax must realize its truth regardless of historical or practical confirmation.

The same is true of the taxation of real estate. Many large manufacturing plants are located in small villages which cannot afford to employ an assessor expert enough to value such property. The cheap way is to have a corps of expert assessors for the whole state. Here are two low grade iron mines side by side. The operating company in the one case has valuable connections with iron furnaces and large consumers and because of this fact it can operate the mine at a profit. The other company has no such connections and cannot mine its ore profitably. How are the two mines to be assessed; and what local assessor is fitted to handle such difficult cases? Again in some thinly settled districts there are mines or large manufacturing plants the taxation of which frequently supplies more money than the local district can utilize wisely. All these things call for intimate linking up of the central and local jurisdictions.

In the writer's opinion it is idle and academic—in the worst sense—to say that we can have general or central supervision over local taxes without the central jurisdiction making active use of the

same basis of taxation. Theoretically, yes—practically, no. What local government in the United States would brook continual control and supervision by a state body which had no vital or real interest in the taxes and assessments concerned? On the other hand, what American legislature would make the appropriations necessary to maintain an effective central commission unless that commission were actively engaged in supervising assessments which the state government itself was to utilize?

The same line of thought applies to the "state equalization." Much fun has been poked at this in the past, because in most places the state equalization was made by an *ex officio* board which had no serious interest in, and no real knowledge of, the work it was called upon to perform. But just as soon as the state equalization is undertaken seriously it becomes the opening wedge of tax reform. In a large number of states in which the greatest improvement in tax administration has been made in the last five years, the necessity of making a state equalization has proved the beginning of tax reform. The knowledge acquired in this work is exceedingly valuable to local officials and frequently can be obtained in no other way.

Both the state and local governments need to use the same basis of taxation not only to secure administrative coöperation, but also to prevent extravagance on the part of the state government. To give the taxation of the large corporations exclusively to the state government for its support is good neither for the corporations nor for the state government. It concentrates corporate influence at the state capitol. If the corporations are unusually strong they may be powerful enough to keep state expenditures down and thus get off with an unfairly small share of the general tax burden. If they are weak, special corporation taxes may be pushed unjustifiably high and the state government spend too much money. Above all things, the state government needs the criticism and check that come from the the farmer, the home owner and other small taxpayers, who constitute the majority of the electorate. To deprive this class of its immediate interest in the expenditures of the state government is openly and deliberately inviting extravagance.

This last assertion is probably proved by the financial history of the last decade. I cannot speak with certainty because statistics are not available, but I venture to predict that when the next census volume on wealth, debt and taxation appears, contrasting

state expenditures in 1913 with those in 1902-1903, it will be found that the increase in expenditures has been greatest in those states which either have achieved separation or have approached it most closely. New York, California, New Jersey and the other states in which separation has been most nearly achieved will be found, I believe, greatly to have outstripped their competitors in rapid expenditure.

This is the deepest vice of separation—it does not separate. When the sources of revenue are segregated, the state government is apt to find itself for a short period on "Easy Street," with ample revenue easily secured. But the spending ability of the average state legislature is great and within a short time the new sources of revenue are likely to be exhausted and the state legislature to find an irresistible temptation to lay on a small state tax once more. Substantially this has happened in New York and California. It is irrelevant to say that in these cases the state tax has been necessitated by extraordinary expenditures. The answer is that the absence of a state tax levy invites such expenditures.

Finally it should be noted that neither experience nor theory warrants the belief that the mere abolition of a state tax will greatly improve assessment work. In the tax bill of the average American taxpayer the state tax accounts for only 11 per cent of the total. The remainder, 89 per cent, represents county and local taxes, and it is primarily to avoid these that the assessor is subjected to the pressure which so frequently makes his work inefficient. Many, if not most, of the states which have made marked improvement in assessment work during the last five years are states with a comparatively high state tax and using the device of state equalization. Arizona, Colorado, Minnesota, Michigan, Ohio, West Virginia and Washington are merely some of the states without "separation" which have greatly improved their assessment work in the past five years. In Wisconsin for a number of years the state tax practically disappeared. During those years little improvement was marked in the local assessments. Later the state tax was increased and the local assessment work rapidly improved. The city of Milwaukee went to a full value basis in the latter period when the state tax was quite an important factor. In states like Maryland and Virginia where there is no central control³ or state equalization and where the ratio of true to as-

³ In Maryland, since the recent establishment of a strong state tax commission, this is no longer true.

essed value varies from twenty to ninety per cent among the various counties, the imposition of a high tax is obviously an important factor in demoralizing local assessments. But what these states need is not separation but central control. Pennsylvania has had something akin to separation for many years. The quality of its local assessment work is, from all the writer can learn, below rather than above the average.

If space permitted it would be desirable to point out in detail that for the state government to take over enough sources of revenue to accomplish separation would in the average state deprive the local government of property or other sources of taxation which they cannot afford to spare. A realization of this fact, I understand, prevented a recommendation of separation in the recent admirable report of the Kentucky tax commission. The truth is that while there is no very rigid or exact connection between the property within a given jurisdiction and the necessary governmental expenses of that jurisdiction, there is a very real connection of this kind which cannot be wholly disregarded. There is more reason perhaps for the retention by the state government of all taxes on steam railroads than in the case of any other form of property or industry. But even in this case serious injury may be done to particular local jurisdictions. Take a small city or village in which important railroad shops are located: They may constitute and frequently do, a large part of the property of this place, and the principal expenses of the local government may arise from the provision of proper schooling and fire protection for the district occupied by the railroad shops. To deprive this jurisdiction of all taxes from this source is inequitable and unwise. In short, while there are some taxes, including that on steam railroads, which are particularly adapted to state use, modifications and exceptions must be made even with reference to this tax and when we further extend the sphere of exclusive state taxes we almost always encounter serious trouble.

In conclusion I may be allowed to quote a summarized statement of this problem written seven years ago. Since that time I have watched the development of tax administration carefully and its trend during the last seven years seems strongly to confirm the opinions expressed at that time. There is one possible exception to this. The progress of centralization, and in particular the extension of powers of the state tax commission, will possibly receive a tem-

porary check in the next few years. This merely means that the task of introducing efficiency, certainty and equity into local assessments is an unpopular and difficult one. There is every confirmation of the proposition that to accomplish such a reform there must be (except for large cities) a large element of outside pressure emanating from central authority, such as a tax commission. But owing to the rapid expansion in expenditures during the last few years and the consequent increase of taxes, the progress of this reform will possibly be slightly checked in the near future. The movement is inevitable, however, and in due course will take its way forward. The summarized statement made several years ago at the first meeting of the National Tax Association follows:

1. The state legislature should, in my opinion, without reference to the local divisions and without respect for impossible plans of local fiscal democracy, abolish the personal property tax and introduce a substitute therefor, if one can be devised.

2. If this is impracticable, they should introduce at once some scheme of limited local option which will permit particular districts to abolish the personal property tax. No plan should be entertained, however, which will interfere with central supervision of assessments and central control over county equalizations.

3. This carefully limited measure of local option should be introduced without reference to the separation of state and local revenues.

4. Similarly, the question of what sources of revenue should be retained by the state ought to be settled absolutely on its merits without reference to home rule, by a careful study of tax jurisdictions and the connection between property or business and the expenses of local government. Doubtful points should be decided in favor of the local jurisdictions; and equitable apportionment should not be strained one inch in order merely to supply the state with revenue enough to get along without the levy of direct property taxes. If, after the apportionment of sources between state and local governments, the state has not sufficient special revenue to pay its expenses, let the deficit be raised by a state tax upon real estate, including in real estate the corporate and commercial values assigned to the local governments. The evils of an equalization based upon real estate are less than the evils of the unconscious, haphazard equalization involved in the retention by the state of a number of revenues which more logically belong to the local divisions.

5. Finally, I assert with some confidence, that if the equalization is confined to real estate, and if it is made by an efficient tax commission which takes its work seriously, it is not a curse but a blessing. In the first place, the payment of some direct state tax stimulates the interest of the citizen in the expenditures of the state government. In the second place, the equalization can be made, with all necessary accuracy, so accurately in fact that no fair-minded

person, after studying thoroughly the conditions of the problem, will question its substantial accuracy as between county and county. It can be made without prohibitive expense—it is not necessary, as is sometimes asserted, to reassess every parcel of real estate in the commonwealth to get at the truth. And in gathering the data upon which to base its conclusions, the tax commission will obtain indispensable information concerning local assessment work, besides securing material absolutely necessary for the proper performance of the work of county equalization. The county equalizations are, in the aggregate, more important than the state equalization; but at the present time they are woefully inaccurate. The county officials who make these equalizations are, as a rule, destitute of reliable data upon which to base their apportionments, and, like the local assessors, they will never do their work efficiently until they are forced to do so by central supervision and state aid. Reform in these matters must come from without.

TAXATION OF PUBLIC UTILITIES

BY DELOS F. WILCOX,

Franchise Expert, New York City.

An intelligent discussion of this subject requires a preliminary analysis of the nature of public utilities and their relations to governmental bodies. If a public utility is to be regarded as a private enterprise, operated primarily for profit, subject to the ordinary restrictions imposed upon other profit-seeking enterprises, no objection can be raised to the levying of taxes upon its property or earnings in the same way that similar taxes are to be levied on the property or earnings of other private undertakings. On the other hand, if public utilities are to be regarded as agencies of the state or the municipality, performing strictly public services under stringent public regulation, the levying of taxes upon their property or earnings is quite another matter. At this moment the relations between public utilities and governmental bodies are in a transition stage, and, therefore, it is not easy to formulate a rule in regard to the taxation of utilities that will be universally recognized as correct in theory or practice. In my judgment, however, we can assume that the patent and inevitable tendency in the development of the relations between the utilities and the public is toward the recognition and full establishment of the agency theory.

Formerly, public utility investments were both in theory and in practice largely speculative, and the utilities were regulated very little. With the rapid growth of the cities and the disproportionate increase in the importance of public utilities, there has come a pretty general recognition of the fact that whatever may have been the nature of such utilities when they were first initiated, they have now become predominantly and essentially public. This country had come to a pass where thoughtful men recognized that the only alternative open for the future was public ownership or strict public regulation. The public service commission movement, which has been sweeping over the country during the past seven or eight years, has gone far toward establishing in the law and practice of the land the fact that these utilities, even where owned and operated by private

individuals or corporations, are public agencies performing public functions.

It would be inaccurate to say that the principle of public agency has yet been completely established or even universally recognized as proper. For example, the courts have held that public service corporations are entitled to earn a reasonable return upon the present fair value of their property, including in such value the present value of their land holdings, irrespective of the original cost of such lands. This rule has been somewhat restricted in certain recent cases, and the cost-of-reproduction theory, which for a number of years received widespread recognition in connection with the valuation of public utility properties for ratemaking, has recently been subjected to severe criticism by various courts and commissions. The reproduction-cost theory and the present-value-of-land theory are inconsistent with the public agency theory and in so far as they *continue* to hold their place in the practice of the country, this fact must be taken into consideration in the discussion of the taxation of public utilities.

Assuming that the public agency theory is bound to prevail in the long run, we are thrown back upon a consideration of the propriety of exploiting publicly owned utilities for the relief of taxation. For the principles governing the operation of privately owned utilities subject to stringent public regulation, so far as they relate to the burdens imposed upon the consumers for the benefit of the tax-paying public, should not differ from the principles applying to the operation of publicly owned utilities.

So long as public utilities were luxuries for the use and advantage of a small minority of the people, it could be urged with at least a show of reason that such utilities ought to pay not only ordinary taxes upon their tangible property but also special taxes or compensation for their special privileges in public rights of way. Certainly, it would seem unreasonable that a service designed for the use and profit of a small minority of the people should be given special privileges for the use of public property, to the manifest inconvenience and disadvantage of the great majority of the citizens of a city.

At the present time, however, the standard utilities, such as local transit, water supply, gas, electricity for light, heat and power, the telephone, and transportation terminals, have come to be necessities in the common life of the general public. They are no longer

mere luxuries. Moreover, they are not only necessary to the great majority of the individual citizens, but their proper development now has a fundamental and far-reaching influence upon the organic development of each urban community as a whole. The public nature of these services rests both upon their universality and upon their community influence. Under these conditions it seems hardly necessary to argue that the governmental bodies should not seek to make profits out of such enterprises for the relief of general taxation. To do so would be to tax public property and public agencies.

Even if we assume the ultimate establishment of the public agency theory in universal practice, we shall still have to consider just what that means. When we escape from the theory that public utilities are luxuries operated for profit, we start off on a long road with many possible stopping places. Many public services are even now rendered free to those who have need of them. While it is a rather far cry from the assertion that public utilities should not be operated for profit to the prophecy that some time they will be operated entirely at the expense of the general taxpayers, the road from one point to the other in public policy is a direct one. At the present time, it is customary to say that public utilities ought not to be operated for profit, but that they should be treated as self-sustaining business enterprises rendering their services at cost. Yet, in practice, while the rearguard of the utilities lingers in the realm of profitable exploitation, the vanguard has reached beyond the neutral area into the field of governmental subsidy. Indeed, it requires careful analysis to determine just what it takes to make a utility fully self-sustaining. For example, while the writer has strongly opposed any system of profit-making or special taxation that would result in taking a portion of the earnings of the utility out of the business, he has with equal urgency favored a plan by which public utilities should be made to pay for themselves out of earnings. In other words, according to his definition, a public utility is fully self-sustaining only in case its earnings are sufficient to pay operating expenses, interest on investment and also amortization charges. This definition has a leaning toward conservatism. It is based upon the theory that the capital invested in a public utility should be retired within a reasonable time, partly because the physical property may become obsolete and partly because a utility that has paid for itself will be in a better position to render increased service at reduced

cost, in accordance with the inevitable trend of public need as time goes on.

It is possible, however, to regard a utility as self-sustaining where it merely pays the expenses of operation plus depreciation and interest charges, leaving the capital itself either to be regarded as a permanent investment or to be amortized out of the proceeds of taxation. So long as utilities are owned and operated by private corporations subject to commission regulation, the tendency seems to be to regard the investment as a permanent one and therefore to make no provision in the rates for amortization. Under public ownership, on the other hand, no clear tendency can be traced. In some cases both interest and sinking fund on public utility debts are taken care of out of taxes as a general offset for the direct services rendered by the utility to other departments of the government. Sometimes utility bonds are retired out of earnings, and in some cases even the extensions of the plant itself are made at the expense of the consumers. The rule is, however, that publicly owned utilities do not pay taxes on their property or earnings in the same way that privately owned utilities do. At the present time there is a tendency to require publicly owned utilities to render a strict account of themselves, including an estimate of the amount of taxes which they would have to pay if they were in private hands. This is merely for the purposes of comparison and public information.

We may mark several stages in public utility development as follows:

1. Public utilities operated for profit and, in case of private ownership, accompanied by various forms of taxation and partnership intended to give the public a share in the profits.
2. Public utilities operated at cost, including in cost ordinary taxes and interest, and amortization charges sufficient to retire the investment within a reasonable fixed period.
3. Public utilities operated at cost, including in cost ordinary taxes and interest charges, but no amortization.
4. Public utilities operated at cost, including in cost interest charges, but excluding both amortization charges and general taxes.
5. Public utilities operated at cost, with the help of subsidies from taxation to take care of interest charges.
6. Public utilities operated according to a fixed standard of rates and service, with deficits in operating expenses made up out of taxation.

7. Public utilities operated at the expense of the taxpayers, all service being rendered free of charge.

The public agency theory is controlling in all of the stages just enumerated except the first. This first stage may be regarded as a "left over." It is a relic of the past. At the same time, some individual utilities are so surrounded by tradition and so fortified by contracts and judicial decisions that no one can foresee how long they may linger in this first stage. So far and so long as public utilities continue to be operated on a speculative basis in accordance with the ancient traditions, taxation may be regarded as a legitimate means of securing public revenue and also as an instrument for shrinking the values of special privileges that have slipped out of public control in past years through the improvidence or corruption of public officials. Taxation should certainly be regarded as one of the most effective weapons the state has for subduing the pride and independence of the perpetual franchise barons. Relief from various forms of taxation may be used properly and effectively as a means of inducing public utility franchise holders to accept a readjustment of their contractual rights with the public, wherever such a readjustment seems to be of vital public necessity. Moreover, any income which the public may derive from special forms of taxation of privately owned public utilities ought, in all good conscience, to be put away into a "war-chest" to help in the inevitable campaign for the conquest of the refractory utility corporations. By "conquest" I mean acquisition, and by "campaign" I mean the process of acquisition at a reasonable price.

Of primary interest in the discussion of the taxation of public utilities is the question as to whether or not taxes should be levied on land devoted to public use in connection with the supply of a utility. One of the chief points at which the agency theory has been limited by the trend of court decisions is in the matter of the value of land upon which public service corporations are entitled to a fair return. As the law now stands, the private owners of a public utility are entitled to the benefit of the increment in land values. One of the tax reform programs that is receiving wide support calls for the gradual increase of the tax on land values and the gradual elimination of other taxes. This policy, if carried through to the final limit, would have the effect of taking away all or most of the selling value of land, and would therefore deprive public utility owners, by means of taxation, of the increment in land value in just the same way as it would

deprive other land owners of such increment. If the gradual stiffening of the land tax is to be adopted as a permanent public policy, there certainly is no reason why the private owners of public utilities should be exempted from its effects. Therefore, it becomes important to consider just what is the effect of the taxation of land devoted to public use in connection with a public utility. Under monopoly conditions, if the rate charged for the service is a fixed sum, such as the five-cent street car fare, it is obvious that the exemption of public utility land from taxation would redound to the benefit of the owners of the public utility and not to its patrons. If, instead of a predetermined, fixed rate for the service, a corporation is permitted to charge "all the traffic will bear," then, also, the exemption of the company's land from taxation would result in a direct benefit to the owners rather than to the patrons of the utility. If, however, the utility is subject to continuing regulation, on the theory that it will be allowed to earn a fair return upon a fair present value of the property and no more, then the exemption from taxation of land occupied by the utility would result in a reduction of rates or an improvement of service and in either case would redound to the benefit of the utility's patrons, and would not confer any particular advantage upon the owners of the utility. This result follows from the fact that under the system of continuous regulation all taxes are made a part of operating expenses. Therefore, it would appear that in so far as public utilities are to be subject to constant and effective regulation in the matter of rates and charges, the correct policy would be to exempt their lands from taxation, on the same theory that any other lands devoted to public use are so exempted. The fact that the owners of the utilities are considered to be entitled to the increment in land values has no bearing upon the subject, for the taxation or exemption of the particular lands owned by the public utilities would under conditions of perfect regulation be a matter of interest to the consumers on the one hand and the general taxpayers on the other, but not to the owners of the utility as such.

What has just been said in regard to the land tax applies with equal force to the special franchise or easement tax so far as this tax applies to intangibles. The special franchise tax of New York, however, defines the intangible right to use the street as land, and the tracks, poles, wires, pipes and other fixtures in the street as improvements upon land, analogous to the buildings on land not situated

within street limits. The taxation of buildings and street fixtures devoted to public use by a public utility has all of the disadvantages of the taxation of improvements generally, except that in cases where the utility is not subject to continuous public regulation as to rates the taxation of these portions of the company's property cannot be shifted to the shoulders of the consumers. It would seem, therefore, that the special franchise tax, as applied either to intangibles or to tangibles, is of no value as a restrictive measure except in the case of public utilities which are not subject to public regulation or which have their rates established by contract. Under all other circumstances, the tax upon public utility real estate, whether in the streets or not, is to be considered merely as a revenue measure. If the occupation of land and the use of buildings and other improvements upon land are considered as a part of the legitimate cost of a self-sustaining business, then public utilities may be required to contribute their share to the public treasury to the same extent that other occupiers of land and buildings are required to contribute. Exemption from ordinary real estate taxes will gradually be brought about as public utility services come to be recognized as more and more public in character.

The personal property tax, the corporate franchise tax, and the tax on gross or net earnings, as applied to public utilities, are to be regarded as relics of the time when public service corporations, in spite of their name, were not regarded as agencies performing public functions. These kinds of taxes cannot be justified except as they apply to public utilities still lingering in the speculative profit-seeking stage. To the extent that privately owned utilities are brought under effective public regulation, these taxes become as illogical as they would be if applied to municipal water works, docks, markets and lighting plants.

We must now consider that group of taxes and service charges which in reality represent legitimate items of operating cost. This group includes the obligation to pave and repair streets (or in lieu thereof the paving commutation tax), sprinkling and snow removal charges, license fees, pole taxes, bridge tolls, and so forth. The theory of these taxes and charges is either that the public utility has the special use of certain public property to the disadvantage of other users and should therefore be required to pay an equalizing tax or rental, or that in the course of its operations a public utility actually

destroys portions of the street which it ought to replace, or compels the general municipal authorities to incur expenses which the utility ought to stand. In so far as it can be shown that the presence of street railway tracks in a street destroys the pavement or requires the widening of the roadway for the accommodation of general traffic, the additional costs involved may properly be charged to the street railway if that utility is to be self-sustaining. In like manner, as the operation of cars increases the dust nuisance, a part of the cost of oiling or sprinkling the streets may properly be charged to the street railway. The same reasoning applies to the removal of snow and ice. Furthermore, in all cases, the street railway or other utility should be charged with the actual damages to persons or property caused by the construction or operation of the utility in the streets. The erection of poles and wires naturally interferes with and damages to a certain extent the shade trees along the streets, and the laying of conduits or water or gas pipes may also damage trees and injure pavements. Whether these various extra expenses and costs shall be paid directly by the utility, or whether they shall be paid in the form of commutation taxes, is immaterial to this discussion. In either case, they form a legitimate part of the operating expenses and cost of service of the utility. What forms they shall take is a question of public expediency and public policy in each state or city.

Finally, we should consider those forms of forced contributions which, though matters of contract, are nevertheless for all practical purposes in the nature of a tax imposed upon public utility corporations as the price of their franchise. They include various forms of free services and division of profits. Where a city enters into a co-partnership scheme with a private corporation, with a provision that the city shall have a certain share of the net earnings of the enterprise, it is to be noted that there is a tendency for the city to abandon the public agency theory and to ally itself with the private corporation as a profit seeker. In so far as profit sharing and other forms of contractual payments are adopted as the most expedient means under the particular circumstances for securing to the city a fund to be used in the purchase of the utility plant, such modes of securing money from public utilities seem to be entirely justified and not fundamentally inconsistent with the public agency theory.

In concluding the discussion of this complex and somewhat elusive subject, we should reemphasize the following principles:

1. In so far as public utilities remain on a speculative basis, and continue in the enjoyment of special privileges protected by judicial decisions and contractual rights, taxation may be resorted to both as a revenue measure and as a weapon for regaining public control over such utilities.

2. In so far as privately owned public utilities are subject to adequate continuous public regulation as to service and rates, the principles of taxation as applied to them should be the same as the principles of taxation and profitmaking applied to publicly owned utilities.

3. Whatever revenue public bodies may derive from public utility taxes or contributions, except to the extent that such taxes and contributions may be regarded as a part of the actual and legitimate cost of service, should be used as a fund for amortizing, first, franchise and other intangible values and, second, the capital investment in the physical property of the utilities.

4. As the public agency theory of public utility operation comes to be more widely recognized and more fully established, the tendency will undoubtedly be to diminish and finally eliminate public utility taxes and contributions and, *per contra*, to subsidize public utilities out of taxation to the end that a higher standard of service may be rendered at a fixed or diminishing charge to the public.

THE RECENT INCREASE IN LAND VALUES

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1. The Significance of Land Value Increase

The recent increase in land values is of immense economic and social significance, because of the intimate relation which exists between this phenomenon, and that most pressing of modern economic dilemmas,—the rising cost of living. Although the pressure of increased living costs is keenly felt on every hand, few people realize what an important part the increase of land values plays in the upward movement of prices.

Since 1896 prices have advanced unequally. Land values have apparently played a large part in this inequality. A study of retail prices shows that among food products, prices rose most rapidly in the case of meat, dairy products and cereals, which were derived directly from the land. The prices of raw materials show a like relation. Timber, grain, and other raw materials obtained directly from the land, have risen rapidly in price, while semi-manufactured materials have increased less rapidly, or have decreased in price.

The prices of those materials most directly secured from the land have risen fastest. Does it follow, logically, that the increase in land values has been more marked than the increase in the prices of the other factors entering into production?

A study of the cost of labor, capital, management, land and the changing cost of the chief items of expense in production shows that among all of the value increases reported during the past two decades, the increases in land values hold first place.¹ The cost of labor and of capital have increased only slightly in comparison. There is no parallel in any other field, to the advance in those land values upon which civilization most directly depends—timber lands, fertile agricultural land, and land in large commercial and industrial centers. The recent rise in land values has been little short of revolutionary.

¹ *Reducing the Cost of Living*, Scott Nearing. Philadelphia: Geo. W. Jacobs and Co. Chapters 8 to 15 inclusive.

It cannot fail to leave a profound impress upon the economic problems of the day.

The figures for land value increase are available chiefly for farm lands, city land and timber land.² Though the material in these three fields is far from complete, it is sufficient to give some idea of the extent of land value increases.

2. Farm Land Values

The facts pertaining to the increase in farm values are readily accessible. The Census Bureau, since 1850, has gone into great detail in its discussion of farm values. The censuses of 1900 and 1910 give a separate statement of the value of land and of the value of buildings on the farms of the United States. Previous to 1900, land and buildings were grouped together. The last two censuses therefore furnish the only figures showing the value of farm land separate from the value of the improvements on the land. For those two censuses, however, the figures cover the value of farm land over the entire country.

The figures of the thirteenth census show that, during the ten years between 1900 and 1910, the value of all farm land in the United States increased from \$13,058,000,000 to \$28,476,000,000. The percentage of increase is 118.1 per cent. Thus in one decade, the value of the farm land in the United States was more than doubled.

Every section of the United States shared in this farm land increase—the smallest rise in farm land value was in the Middle Atlantic States, 19.9 per cent. The greatest increase was in the Mountain States, 313.4 per cent. For the other sections of the country, the increases were:—New England States, 34.8 per cent; East North Central States, 82.0 per cent; East South Central States, 87.4 per cent; South Atlantic States, 109.3 per cent; West North Central States, 158.2 per cent; Pacific States, 166.5 per cent, and West South Central States, 184.8 per cent. The smallest increase in total value is reported from the New England States (\$98,673,621); the largest is reported from the West North Central States (\$6,159,683,640). Thus the increase in the value of the land in the West North Central States alone was equal to almost exactly half of the total value of all of the farm lands in the United States in 1900.

² "The Increase of American Land Values," *Popular Science Monthly*, November, 1913, pp. 491-505.

When the figures for farm land increase are analyzed by states, it becomes more apparent that the increasing values are sectional rather than general. For instance, among the New England States—New Hampshire, Vermont, and Massachusetts report increases in land value between 20 and 30 per cent; the increase for Connecticut was 37 per cent; for Rhode Island, 12 per cent, and for Maine, 75 per cent. The ratio of increase in the Middle States is less than that in New England. The figures for New York are 48 per cent; New Jersey, 33 per cent; Pennsylvania, 9 per cent. The increase for Pennsylvania is the smallest shown by any state between 1900 and 1910. The ratio of increase among the East North Central States varies from 45 per cent in Michigan, to 104 per cent in Illinois. The variations in the West North Central States are much greater. The increase in farm land value in Minnesota was 82 per cent, while in South Dakota, it was 377 per cent. Among the South Atlantic States—Delaware, Maryland, Virginia, and West Virginia report increases of less than 100 per cent in farm land values. Kentucky and Tennessee, from the East South Central group, and Louisiana from the West South Central group also report land value increases of less than 100 per cent. All of the other Southern States show increases of more than 100 per cent. In the lead are Florida, with an increase of 204 per cent, and Oklahoma, with an increase of 334 per cent. Only three among the Mountain and Pacific States report increases in farm land values of less than 200 per cent. They were Utah, Nevada, and California. The increase in farm land values in Colorado was 302 per cent, in Montana, 330 per cent; in Washington, 421 per cent; in New Mexico, 470 per cent; and in Idaho, 519 per cent.

These figures for increasing farm values take on additional significance when a comparison is made with the acreage of the farms. During the decade between 1900 and 1910, when the value of land in American farms increased 118 per cent, the total acreage of improved farm land increased only 15.4 per cent. Nowhere is the increase in the improved farm land acreage in any sense commensurate with the increase in farm land values. The New England States and the Middle Atlantic States, with increases of ninety-eight and two hundred forty-two millions respectively in farm land values, report decreases in the acreage in improved farm land. The decrease for New England was 10.8 per cent, and for the Middle Atlantic

States, 4.8 per cent. The East North Central States, with three and a quarter billions increase in farm land values, report an increase in improved farm land acreage of only 2.6 per cent; while the West North Central States, with their stupendous six billions of farm land increase (158.2 per cent), show an increase in the acreage of improved farm land of only 21.1 per cent. The increases in improved acreage for the other sections of the country are: South Atlantic States, 5.2 per cent; East South Central States, 9.2 per cent; West South Central, 46.5 per cent; Mountain States, 89.4 per cent, and Pacific States, 17.5 per cent. If these figures for increase in improved farm land acreage are compared with the figures given in the preceding paragraph, showing increase in farm land values, the differences are astounding. Values have increased far faster than acreage.

The census tables showing the increasing per acre value of all farm land, and of improved farm land, fully bear out the suggestions offered by the contrast between farm land values and farm land acreage. The value of land in farms is increasing far more rapidly than the area in farms.

A further analysis of the crop yields per acre fails to show any increasing yields for the increasing farm land values. Neither cereal crops nor meat products have greatly increased in the per acre yield, during the past ten years. Indeed, in a few cases, the per acre yield in cereal crops has actually decreased. Meanwhile the value per acre has been moving rapidly upward.

The elaborate census figures on farm land values are unavailable for comparison previous to 1900, because of the failure in earlier censuses to separate the value of farm lands from the value of farm buildings. The last two censuses, by making this separation, have made possible a statement of the phenomenal farm land value increase which occurred during the first decade of the twentieth century.

3. *City Land Values*

A scientific statement of the increase in city land values is impossible. During many years, persons interested in land taxation have been compiling individual instances of the increase in city land values.³ It is only within recent years that official figures have been

³ See, for example, *The A B C of Taxation*, C. B. Fillebrown. New York: Doubleday, Page and Co., 1912.

sufficiently definite and extensive to warrant even the most general conclusions.

There seems to be no question but that city lands, are, on the whole, increasing in value. The extent of the increase is suggested by the records which are available in that rapidly growing group of cities which publish separate assessments for land values and for improvement values. The figures showing city land value assessments are far from accurate. The failure to adopt any standard method of assessment has made comparison between the figures for different cities difficult or impossible. The best idea of the increase in city land values can be gained from an examination of the facts for a number of individual cities.

The most complete contemporary figures are published in the report of the Commissioners of Taxes and Assessments of the City of New York. A separate assessment of land and improvements has been made in New York only since July 1, 1906. At that date, the ordinary land value for Greater New York was \$3,367,233,746. On January 1, 1914, this land value had been increased to \$4,602,852,107.⁴ The tentative valuation for 1915 is \$4,778,836,786.⁵ During a period of approximately eight years, in which there has been no increase in the size of the city, the land values of New York have increased about one and a quarter billions—an amount equal to rather more than a third of the total land values for 1906.

The increase in the land values of New York City has been very unevenly distributed among the different boroughs. In the Borough of Manhattan, which reports more than two-thirds of the total land values for the entire city, the increase between 1906 and 1915 has been only about one-fifth; in the Borough of the Bronx, the increase is equal to three-quarters of the land values for 1906; in the Borough of Brooklyn, the increase has been slightly less than half; in the Borough of Queens, the increase has been almost four-fold; in the Borough of Richmond, it is slightly more than double.

The figures for Boston⁶ land values are available between 1889

⁴ Report of Commissioners of Taxes and Assessments of the City of New York, 1914.

⁵ Letter from the Department of Taxes and Assessments, October 19, 1914.

⁶ Annual Report of the Assessing Department for the year 1913. City of Boston Printing Department, 1914, p. 18.

and 1914. In 1889, the total land value was \$350,404,975, and in 1914, the value was \$722,736,200. The Boston land values have, therefore, doubled in twenty-four years. Between 1906 and 1913, the Boston land values increased about 12 per cent. While there has been no time at which the rise in Boston land values has been extremely rapid, there is no record of a year when the land values of the city have decreased.

The figures for Washington, D. C.,⁷ available between 1889 and 1914, show an increase from \$56,585,904 to \$169,212,099. This three-fold increase has occurred in the same period during which the Boston land values doubled. The rise in land values in Washington has been particularly irregular. In 1894, the land values were reported as \$112,830,383; in 1905, the values were \$118,912,580.

Buffalo reports a separation of land and improvement values from 1907 to 1914. In 1907, the total land value was \$164,693,675; in 1914, \$177,990,040.⁸ The increase in this case is negligible.

The land value figures for Milwaukee show an increase between 1890 and 1910, from \$52,385,960 to \$99,502,195. Since 1910, the assessments in Milwaukee have been made upon full valuation, instead of the former 60 per cent; hence the figures since that date are not strictly comparable.⁹

The land values and improvement values in Kansas City, Missouri, have been separated since 1891. In that year, the land values of the city were \$53,171,420; in 1914, the land values were \$72,176,920. The increase was thus approximately two-fifths of the 1891 land values.¹⁰

The records from western cities show more rapid rates of increase than those in the East. In Dallas, Texas, the city land value was \$16,477,225 for 1907; and \$51,996,900 for 1914.¹¹ The figures from Portland, Oregon, show a land value, in 1900, of \$39,512,150. The value for 1914 was \$54,832,600. In San Francisco, the land value in 1905, was \$304,135,385; for 1914, \$304,579,974. The figures for San Francisco are, of course, influenced by the losses due to the

⁷ Letter from the Assessor of the District of Columbia, October 20, 1914.

⁸ Letter from the Department of Assessment, Buffalo, New York, October, 1914.

⁹ Letter from the Tax Commissioner of Milwaukee, December 31, 1912.

¹⁰ Letter from the City Assessor of Kansas City, Missouri, October 24, 1914.

¹¹ Letter from the Commissioner of Finance and Revenue, October 22, 1914.

earthquake. On the whole, and with a few exceptions, it appears that the ratio of increase for city land values has been far less than that for farm land values.¹²

4. *Timber Land Values.*

A recent study made by the federal government has thrown considerable light upon the question of timber land values. For years, wholesale price lists have shown a marked increase in the values of lumber and lumber products. This rise in the price of the raw material is a striking reflection of the increased price of the land from which timber is secured.

The federal investigators encountered great difficulty in reaching definite conclusions regarding the increase in timber land values. One piece of timber land in a given locality frequently increased in value much more rapidly than another piece. The situation with respect to transportation facilities, the kind of lumber, the conditions under which the owner was willing to dispose of the tract—all had a marked influence upon the per acre value of the timber land.

Despite the impossibility of measuring accurately the average amount of the advance in timber land values, due to the extreme variations of "location, species, quality and stand," the federal report derives certain general statements which, while not applying to any one individual tract, bespeak the prevailing conditions over a considerable territory.

The men who compiled the federal report comment with astonishment upon the increase in timber land values, generally.

That the increase has been nothing less than enormous is recognized by the men most familiar with the business. In speaking of the rise of prices in the last twenty years, they refer to changes from 12½ cents to \$4 a thousand; from 10 cents to \$3 a thousand; from \$5 to \$20 an acre; 300 per cent in ten years; from \$1.50 to \$20 an acre; from 50 cents to \$3 a thousand. These figures are for southern pine. In cypress: from 15 cents to \$5 a thousand. In the Lake states men in the business similarly speak of increases from "no market value" (hemlock and hardwoods) \$4 to \$10 a thousand; from \$2 to \$6 a thousand (hardwoods). In the Pacific-Northwest similar general statements are made of rises in value, such as 15 cents to \$2.50 a thousand, 10 cents to \$2.50 a thousand; "no market value" to \$2.50 a thousand; 75 cents to \$2.50 a thousand.¹³

¹² Letter from the Assessor's Office, San Francisco, October 22, 1914.

¹³ *The Lumber Industry, Part 1, Standing Timber.* Washington: Government Printing Office, 1913, p. 25.

There is a widespread recognition among initiated timber experts of the immensity of the timber land value increase. The obstacles to an accurate estimate of timber land value increases are patent. Nevertheless, the federal investigators are willing to commit themselves to certain general propositions. Speaking in broad terms, and for the ten year period ending in 1907 or 1908 with the industrial depression, it seems that "the value of a given piece of southern pine taken at random is likely to have increased in any ratio from threefold to tenfold."¹⁴ Numerous instances were discovered where the increase was much more rapid than these figures show, as for example, when tracts which could be purchased in 1896 or 1898 at 10 to 15 cents a thousand feet upon the stump, had advanced twenty or even thirty fold in ten years. The figures from the lake region tend to show that

the general ratio of advance of timber values during the last ten or twenty years has probably been less than in the south. Perhaps the advance of any given tract, taken at random, in ten years from 1898 was most likely to be between two-fold and five-fold.¹⁵

Timber land values in the Northwest have increased about as rapidly as timber land values in the South. "A tract taken at random, is likely to have increased in any ratio from threefold to tenfold in the ten years ending in 1907 or 1908."¹⁶ The federal report indicates, however, that the proportion of extraordinarily rapid increases in land value "is probably greater than in the South."

The value of the land on which timber products are produced has increased with inordinate rapidity. Perhaps there is no single phase of the problem presented by the increase in land value where the cause of increase is more apparent than in the case of timber land values. Timber is universally used. The rate of use in the United States is said to be approximately four times as great as the rate of increase in supply. The result of this situation upon prices and values needs no comment.

Among all of the figures showing increases in land values in the past two decades, those furnished by the federal report and by

¹⁴ Ibid, p. 214.

¹⁵ Idem.

¹⁶ Ibid, p. 215.

private correspondence for timber lands stand out with remarkable distinctness. The increase in timber land values is without parallel in the present land value situation in the United States.

5. The Phenomenal Rise in Land Values

The land value facts at hand, covering all of the farm land of the United States, a number of representative cities, and the important timber areas of the country, indicate that the recent increase in land values has been nothing short of astounding. The phenomenon cannot be explained away. Neither the enthusiasm of local assessors nor the misdirected efforts of badly trained investigators would account for a condition so universal. American land values are rapidly rising.

Prices are increasing everywhere. Since 1896, price-increase has been omnipresent, yet no record of rising prices is so extreme as the record of the increase of the value of those particularly choice bits of the earth's surface which, because of favorable location or unusual fertility, are in great demand.

Whatever the validity of Malthus's theories, there can be no question that the increase in population is augmenting the pressure on the most desirable land in the community. The relation of increase in population to increase in land values is intimate. Each twelve-month witnesses the addition of more than two million people to the population of the United States. Meanwhile, the number of acres of first class wheat land and cotton land; the number of million board feet of standing timber; the number of tons of iron ore or coal still in the ground, and the number of desirable sites for commercial centers, either fail to increase, or, as in case of timber and mineral deposits, actually decrease. The amount of good land is fixed. The pressure of increasing population against the fixity of natural resources, results inevitably in rising values.

The lesson of the recent increase in land values is inescapable. Each passing year makes it more evident that the owners of the most desirable pieces of the earth's surface have a monopoly power which, intensified by each addition to the population and each progressive step of civilization, enables them to place an ever increasing tax upon the activities of the community.

ASSESSED VS. REAL VALUES OF REAL ESTATE IN PENNSYLVANIA

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The importance of adopting correct methods of assessing real estate for purposes of taxation is seldom recognized. Crowded into the background by more popular questions, this problem has so far failed to receive the attention from official and taxpayer to which it is entitled. Although local revenues are largely levied upon the basis of realty assessments, only the sporadic and unintelligent grumbling of the taxpayer sounds the warning against unfair methods. Some excuse for this neglect in the past may be found in the comparatively low tax rates, but no longer is this inattention excusable as the tax rates of our local governments rapidly grow with the expanding field of municipal activities. Increased tax rates make essential a study of the basis upon which they are levied—the assessed value of real estate.

This study of conditions in Pennsylvania is based upon an investigation of the methods of assessing real estate in forty-one counties. These counties include the more populous districts of the state, such as Philadelphia, Alleghany, Luzerne, Lackawanna, Westmoreland, Berks, Montgomery, Dauphin and Elk. The information was secured from county commissioners, assessors and taxpayers. An endeavor was made to discover: (1) what percentage assessed values bear to real values; (2) what are the causes of our present practice in assessing realty; (3) what arguments are used in Pennsylvania for and against the assessment of realty at full value.

The relation of assessed to real values of realty is dependent upon two factors: (1) the percentage at which the county officials endeavor to value property, and (2) the extent to which the assessors within the same county are successful in reaching the percentage adopted. As regards the first factor, the results secured show a marked absence of uniformity within the state. Of the forty-one counties—

- 4 claim to assess real estate at 100 per cent of its value.
- 1 claims to assess real estate at 90 per cent of its value.
- 1 claims to assess real estate at 85 per cent of its value.
- 5 claim to assess real estate at 80 per cent of its value.
- 2 claim to assess real estate at 75 per cent of its value.
- 3 claim to assess real estate at 70 per cent of its value.
- 4 claim to assess real estate at 66 $\frac{2}{3}$ per cent of its value.
- 2 claim to assess real estate at 60 per cent of its value.
- 4 claim to assess real estate at 50 per cent of its value.
- 2 claim to assess real estate at 40 per cent of its value.
- 4 claim to assess real estate at 33 $\frac{1}{3}$ per cent of its value.
- 1 claims to assess real estate at 30 per cent of its value.
- 1 claims to assess real estate at 66 $\frac{2}{3}$ to 75 per cent of its value.
- 1 claims to assess real estate at 50 to 80 per cent of its value.
- 1 claims to assess real estate at 50 to 70 per cent of its value.
- 1 claims to assess real estate at 30 to 50 per cent of its value.
- 2 claim to assess real estate at 30 to 40 per cent of its value.
- 1 claims to assess real estate at 33 to 40 per cent of its value.
- 1 claims to assess real estate at 20 to 40 per cent of its value.

Two facts are emphasized by this table: first, a comparably small number of counties attempt to assess real estate at full value; and second, a great difference exists in the percentage adopted by the various counties in the state. Practically no similarity exists between the various counties.

Within the same county, the assessors are largely unsuccessful in assessing property at the percentage of real value adopted. The success in attaining the percentage desired is dependent upon the ability and experience of assessors. In most counties, the commissioners questioned the ability of the assessors. Where one assessor will value property at the desired percentage, a dozen others will vary widely from it. The result gives great dissimilarity between the various assessment districts within the same county. In but three counties was the belief common that any uniformity throughout the county prevailed. The counties in which the large cities are located have, however, a more nearly uniform assessment than rural counties in the sections investigated.

Such are the conditions at the present time in the forty-one counties investigated. Not only is there a great difference in the percentage of assessed to real value at which the various counties endeavor to assess, but there is an equally great difference within the same county as to the degree to which the nominal percentage is realized in the various districts.

The causes for the conditions above set forth are somewhat confused. Like most subjects connected with taxation much of the trouble is due to ignorance on the part of both officers and public. But the major portion of the trouble can be traced directly to three factors: (1) a deficient system of choosing and controlling assessors; (2) the character of assessments required; (3) lack of knowledge on the part of the taxpayers.

The most general cause given was that the assessment machinery is deficient. In Pennsylvania, outside of Philadelphia, the assessors are generally elected by the people to assess certain districts and are nominally under the direction of the county commissioners. Three evils manifest themselves in this system. In the first place, the commissioners, although nominally having control over the assessors, have little real authority. Such power as they do possess has been nearly lost as a result of non-use. The assessors neglect the instructions of the commissioners without suffering any penalty. The county commissioners stated in many cases that so long as the assessors are elected by popular vote it will be impossible to control them. The result naturally follows that each assessor is working independently of the others within the same county, and chaos results.

Secondly, the present method of choosing assessors by popular vote is weak. The average assessor assumes office handicapped by political and personal friendships and obligations which prevent him from doing efficient work. Being elected by the people, he feels responsible to them and pursues the course most certain to secure reëlection. Low assessments please the taxpayer, and the assessor to secure favor keeps the assessments as low as possible. No matter how intelligent the assessor may be, under such a system he is helpless if he desires reëlection. Furthermore, the assessor frequently feels obligated to the particular property owners who secured his election. The influence of the property owners is particularly bad when as in many cases it results in certain property being assessed at a lower percentage than other property in the same districts. For the past century the property owner has been exerting a steady influence upon the assessor to secure low valuation. This pressure not only has forced assessments exceedingly low in most counties, but makes any change to a higher rate very difficult to secure.

But were not the assessor handicapped in the manner outlined,

even then popular election would fail to provide a good system of assessment. The present method of electing by popular vote men who should know the many forces determining real estate values fails completely. Upon realty values, trained real estate brokers have difficulty in reaching a satisfactory conclusion. The average inexperienced assessor chosen by the people has much greater difficulty in making correct assessments. In order to be on the safe side he undervalues realty. Experienced, able assessors are required to make full valuations. This class of men the present system of popular election fails to provide.

A third defect in the present system is the fact that in Pennsylvania the county millage is levied upon assessments made by local township and borough officers. The result quite frequently is that assessors strive to keep their own districts rated below adjoining ones in order to throw the burden of county taxation upon the other townships or cities. This local effort to evade taxation does much to prevent 100 per cent assessment. The county commissioners endeavor to equalize the assessments of the various districts but in most cases frankly confess that their results are largely unsatisfactory. This difficulty is noted more in rural than in urban counties. Where a state tax is levied upon real estate this problem is even more pronounced and so far its solution has proved almost impossible. Added to local rivalry is that of the different counties so that state boards of equalization are required to give the various county assessments some semblance of equality. These boards, in the limited time at their disposal and with but meagre information concerning realty values in the various counties, can seldom do more than eliminate the more flagrant cases of unequal assessments. Such readjustments as they do make are based upon incomplete data. The method of equalizing assessments (either by state board or county commissioners as in Pennsylvania) has so far proved unequal to the situation.

In addition to the defects in the machinery of assessment, considerable emphasis was laid by county officials upon the complex character of the assessments required. It is pointed out in some counties where the population is increasing most rapidly that the values in suburban districts are largely speculative and are far above the real value of the property. Then in mining districts the claim is made that the assessor is unable to secure any adequate information concerning mineral lands. Correct valuations of such lands are

seldom secured. The same difficulty is urged in the case of manufacturing sites, the values of which are liable to many variations in some districts. The many uses for real estate puzzle the assessor greatly and call for experts to determine the values of different kinds of land and other real property.

But weak assessment machinery and the difficulty of the work do not alone explain the low assessment basis in most counties. The attitude of the voter has been a retarding influence. Whatever influence he has exerted has been in favor of the status quo. The ignorance of the taxpayer prevents any widespread movement for increasing the basis for assessment to one hundred per cent. The mass of the people are opposed to any change in present conditions. The belief is common that an increase in the rate of assessed to real value means a corresponding increase in the tax bill. This idea is partly justified by the tendency of taxing officials to retain the old millage when the valuation is raised. Unless these officials are required by public opinion to lower the tax rate when the proportion of assessed to real valuation is raised, the total tax bill will be raised. But while at present there is a considerable basis for the popular opinion, greater knowledge of the object of the assessment would remove this cause for low valuation. The assessment only determines the relative share which each individual shall pay; the tax rate determines his total payment. Were the assessors, however, to adopt full valuation of real estate they would arouse bitter antagonism on the part of the taxpayers. The majority of the commissioners apparently feel that the people do not desire any change.

Although few attempts have been made to remove the causes just given for present conditions, assessors and county officials are nearly unanimous in condemning the present system of low valuation. The commissioners of only five counties objected to full valuation. This objection was based upon the fact that in their counties when the valuation had been raised, the city, borough, and township governments failed to lower the tax rate, but utilized the increase in assessment to raise more money, much of which in the judgment of the commissioners had been extravagantly spent. So long as the different local governments will not lower the tax rate when the assessment is raised, the commissioners of these counties believe that it is better to keep a low assessment. In this way, the county officers endeavor to keep at a low figure the local taxes. In one county

the assessment was raised and, on the failure of the local districts to reduce their tax rates, was lowered to its original percentage of the real valuation. This argument is severely criticised by most county officials, who say that it is not the function of the county to limit the activities of the local governments and that the citizens themselves have the power to secure lower rates if they so desire.

The officials of the remaining thirty-six counties all believed in the full valuation of real estate. Some doubt existed, however, as to what constituted full valuation. A small minority of the assessors and commissioners were inclined to believe that the value of the property at forced sale should be adopted. Property so sold usually brings a price considerably less than its normal market value. If assessed at full value, the owner of property sold under forced sale would have paid taxes on a greater value than he actually received from the sale of the property. But it is very doubtful whether the forced sale valuation will be widely adopted. In actual practice it varies generally about 80 per cent of the full market value. It in reality constitutes one form of under-assessment and is by the admission of most of its advocates open to the same criticisms which apply to under-valuation.

The reasons usually given in favor of full valuation were the following: (1) it would give more equal and just assessments; (2) it would make easier the work of the assessor; and (3) it would secure a larger basis for local indebtedness under the state law.

Full valuation would give more equal and just assessments. On this question the great majority of assessors and county officials are in harmony with the best judgment of tax experts. Good methods of assessment are more important to the average citizen than a good tax system. The first requisite of a good revenue system is that taxes shall be equitable. Unless the assessments upon which taxes fall are fair, injustice results. Under low valuation, equitable assessments can seldom be secured. Injustice prevails both between taxpayers in the same district and between taxpayers in different districts.

In the first case, under a system of low valuation, the small property owner has not sufficient knowledge to know whether or not he is being unjustly treated. He knows little concerning the relation of assessed to real value. The very fact, in many cases, that his property is assessed at considerably less than full value prevents him

from becoming acquainted with the injustice of his own assessment. Many small property owners consider themselves fortunate when their property is nominally under-assessed, although were they to investigate conditions they might find themselves unjustly treated. The great majority of county boards believe that the large property owner is usually able to protect himself, but that the small property owner cannot be justly treated except under a system of full valuation.

But even should the property owner discover that his property is assessed at too high a percentage, he has little opportunity to have the injustice removed. Under the present system a parcel of land may be assessed far too high upon the basis of 50 per cent valuation. Should the owner protest, he will be asked by the tax officer whether he would be willing to sell the real estate at its assessed value. Since the parcel is assessed at less than full value and yet at a higher rate than the surrounding property the taxpayer is unable to protest the unfair valuation and so in many cases suffers a grievous injustice. The only practical remedy is full valuation.

Not only would full valuation eliminate much injustice between taxpayers within the same district, but it would also equalize different assessment districts. In the same city the densely populated sections and the better residence sections are assessed frequently upon a different basis, with the probability that the better residence districts are favored. The differences in the percentages of valuation used in assessing the various divisions of a county are especially marked in contrasting cities and townships. The tax officers in many counties believe that the cities are assessed at a lower rate than the country districts. The burden of county taxation would then be shifted upon the farmers. In other cases the cities certainly require a higher rate of assessment with the result that the city taxpayer suffers. Cities are frequently more advanced in assessment methods with the result that they are penalized for their progressiveness. Where also state laws limit the city tax rate to a certain millage, the assessment is frequently raised to enable the city to secure the funds made necessary by the increasing functions of the municipal government. In every case of this nature the city property owner has to pay more than his just share of the county's revenue. But even if difference in assessment between city and country is disregarded, wide variance is found to exist between the different rural districts in the same county. For instance in one county it was discovered that

farm lands on one side of the county were assessed at 30 per cent and those on the other side were assessed at 50 per cent. Such inequality as these figures indicate can only be remedied by full valuation. All differences in assessment between the various parts of a county would be eliminated by placing all assessments on the basis of 100 per cent.

Full valuation is more equitable through enabling the owner to ascertain the correctness of his assessment and through placing different districts upon an equality. In addition, it enables the assessor to accomplish his work more scientifically. Nearly every assessor interviewed believed that it would be easier to assess property at 100 per cent than at a lower figure. In order to assess real estate at 30 per cent, it is first necessary to assess at 100 per cent. Full valuation would enable the assessor to use unit values, tax maps, records, etc., much more easily in connection with his work. Only through the use of these tools can present methods of assessing real estate be improved.¹ If publicity with regard to the assessments is to be utilized successfully, as it has been in some cities, 100 per cent valuation will be necessary. There is no way whereby properties assessed at low valuations can be compared successfully. Full valuation forces the assessor to be more accurate. An over-valuation will bring a speedy protest and under-valuations will attract unfavorable comment as soon as the assessor's work is placed before the public. While some assessors dislike full valuation because it will force them to be more careful, the majority feel that the aid of publicity accompanying full valuation would amply repay their trouble and eliminate criticism. From the standpoint of the taxpayer and assessor alike, full valuation is desirable. It gives a more accurate and equitable basis upon which to levy the tax rate, and at the same time assists the assessor in performing his duty.

The third argument in favor of full valuation is the wider basis for local indebtedness which would thereby be secured. In Pennsylvania and in many other states the state law limits municipal indebtedness to a certain percentage of the assessed value of property within the city.² While there are many good reasons for objecting to present methods of restricting local indebtedness there is little

¹ Cf. *State and Local Taxation*, II, pp. 237-247; also *Somers System News*.

² Cf. Horace Secrist in *Journal of Political Economy*, April, 1914, pp. 365-383.

probability of a change in the near future.³ Municipal indebtedness at the present time in most districts is barely within the limit prescribed by law. Many cities are now unable to carry on further improvements deemed necessary. This restriction prevents the city of Philadelphia from making desired improvements. Under the present system if our cities and local districts are not to be hindered in their attempt to make improvements it will be necessary to raise assessments to the basis of 100 per cent valuation. This step is one already being considered in many cities. One of the leading arguments advanced in favor of higher assessments in several of the leading cities in Pennsylvania during the last two years was that thereby more municipal indebtedness might be incurred.

Two minor arguments in favor of full valuation were advanced. In the first place some tax officials believed that the lower millage rate made possible by assessment at real value would tend to lessen the criticism of taxes. Where the assessment is low and the tax rate high, there is an inclination to look only at the tax rate and on that basis oppose all increases whether or not such increase may be necessary. In the second place many commissioners stressed the importance of enforcing the law, which in Pennsylvania provides for full valuation. The continued violation of the state law by elected officials tends to break down respect for all tax laws in their opinion. Since the law prescribing full valuation is on the statute books it should be enforced.

The conditions outlined above, showing a notable failure on the part of our assessing system to value property equitably, demand attention. Low valuation results in discrimination between different taxpayers and different sections of the same county or state. It makes more difficult the work of the assessor. It restricts unfairly municipal indebtedness. That the advantages of full valuation are now recognized by the great majority of assessors and county commissioners is an excellent sign for the future. Three obstacles retard progress: the deficient method of choosing and controlling local assessors, the complex character of the work, and the ignorance of the voter. The latter two can be removed only by education. The first can be remedied by a change in the method of choosing assessors. This important office should be taken out of the hands of inexperienced

³ Cf. Charles F. Gettemy in *National Municipal Review* for October, 1914, pp. 682-692.

officers elected by districts and placed in charge of skilled realty experts appointed by the county commissioners to serve on good behavior. Good methods of assessment, such as publicity, tax maps, coöperation of assessors and realty brokers, already adopted in the city of New York and in certain cities in Pennsylvania, could then be practiced throughout the state. Even the obstacles outlined have not prevented five counties from raising their ratio of assessed to real valuation. With the adoption of the change suggested in the selection of assessors it is not too optimistic to look forward in the near future to the full valuation of real estate practically throughout Pennsylvania.

THE DISPROPORTION OF TAXATION IN PITTSBURGH

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For many years, Pittsburgh, like all Gaul, was divided into three parts. These divisions, which continued until 1912, constituted a classification of real estate for taxing purposes, into "agricultural" property paying one-half the tax rate prevailing in its ward, "rural or suburban" paying two-thirds, and "full city" property paying the full tax rate. The classification plan dates back to 1867,¹ when the boundaries of Pittsburgh were being enlarged, taking in parts of five adjacent townships—back fifty years, when electric cars, telephones, and electric lights were unknown and when you could count on your fingers the American cities honey-combed with sewer burrows, water mains, and gas pipes distributing municipal services over large urban areas. On the theory that taxes were payments for definite benefits bestowed by government upon particular individuals, it was therefore deemed fair to discriminate in favor of farm and rural property not sharing fully in city lighting, policing, fire protection and sanitation. In other words, land classification was a measure designed to meet a specific condition.

The condition changed, however, with the growth of the city, but the discriminations remained on the statute books. The almost unavoidable result was that whole districts, similarly located and otherwise much alike, were placed in different classes; and in the same way individual holdings, often in the same ward, were inequitably taxed. For instance, in the east end of the city, property for some distance along one side of Center Avenue, and also along Fifth Avenue—two main thoroughfares—in 1910, the time of this investigation, was classed "full," paying the full tax rate, while at the same time that on the other side of these streets—very similar in character, more built up, if anything—was paying but two-thirds of the rate. These were large districts. Anomalies in the classifica-

¹ An Act of 1867 created two classes, "rural," and "full city;" in 1876 the third class, "agricultural" was added.

tion of small individual pieces of property are illustrated in a block on North Highland Avenue, bounded, on the other sides, by Stanton Avenue, Beatty, and Hay Streets. This in 1910 showed two taxation classes. Property fronting on North Highland and Stanton Avenues was classed as rural, while just across Supreme Alley, which runs through the block and parallel to North Highland Avenue and Beatty Street, the properties fronting on Beatty Street were classed as full. North Highland had the street car line giving it a full city character, but the Beatty Street properties, while they had some little yard space, were closely built up.

But, to illustrate injustices that were more inherent in the system itself, up from the Allegheny River, near Highland Park, were 105 acres of good high-lying land suitable for plotting into city lots, which had been held out of the market by one family since before the Revolutionary War. The estate was almost entirely surrounded by populous neighborhoods; on the east was the growing East Liberty Section; and on the west the very congested tenement house region which was literally dammed up against the fences of the farm. The land was put through only the motions of farming, hay being the only crop that amounted to anything, and yet until 1912 it never paid more than the "agricultural" one-half rate. Within 300 yards, in the same ward, real estate closely occupied by working people was taxed at full rates. Other illustrative instances could be related at length.

Basing the "rural" class on picturesque grounds and shrubbery, and the "agricultural" class on the presence of woods or large open tracts used in reality or ostensibly for farm purposes—definitions laid down by the law and the court—the Pittsburgh assessors returned the real estate valuations for 1910, as follows:

Full property.....	\$534,642,310
Rural property.....	208,224,892
Agricultural property.....	4,674,748
Total	\$747,541,950

Thus in 1910, real estate to the value of \$212,900,000, or 28 per cent of all, was classed in the rural and agricultural groups and escaped with paying only two-thirds or less (one-half in the case of agricultural land) of the current rate of the wards where located. That is, practically 10 per cent of the total cash values brought the city

no tax revenue whatever. Stated another way, in 1910, as a result of the classification system, over one-fourth of the real estate of Pittsburgh was relieved of one-third or more of its tax rates. The proportions were still higher in previous years.

The property classed as full comprised in the main all business districts, including manufacturing sites and railroad properties, and the congested residence districts where the mass of work people live.



MAP 1. GEOGRAPHICAL LOCATION OF THE THREE CLASSES OF REAL ESTATE

Of these, it was the latter, and the small storekeepers who served them, that suffered. For the former, the situation was mitigated in various ways. Sixty-six feet of right of way, as well as a considerable amount of other real estate owned by railroads operating in the city, was exempt from local taxes and therefore did not suffer from the full classification. Manufacturing properties, by certain exemptions and tendencies toward leniency in making valuations, got off with a much reduced full rate. Other downtown business property, through the system of separate sub-district school taxes,

which will be discussed later, had a low rate compared with small shops in the working class neighborhoods. The greatest anomaly of all, therefore, was that those financially least able were subject to full classification and therefore to the maximum city rates.

Agricultural land, of course, had few, if any, dwellings upon it. The connection between this classification of land and the under-supply and overcrowding of workingmen's houses found in many Pittsburgh neighborhoods seemed direct. For a generation Pittsburgh has been burdened with a taxation scheme which, because of discriminations, made it easy to hold great areas of unimproved land, but which, on the other hand, went gunning for the man who improved a small tract, and leveled at him what in effect was a double tax rate. Moreover, the working definitions of "rural" and "full city" property reduced the tax by one-third on expensive homes surrounded by large lawns, shrubbery, trees and flowers—property owned by precisely the people best able to support the government—while homes surrounded by a mere ribbon of grass, or none at all, and tenements that crowd block after block on both street and alley, paid the highest rates.

The local tax system, moreover, included features other than classification which led to inequalities of burden. Of these the varying tax rates prevailing in 63 separate sub-district school tax districts was as great a fiscal anachronism. Although the classification system modified the working of the separate ward rates, the latter can be best taken up first as a thing by itself.

Pittsburgh Separate Tax Rates. While Pittsburgh's current expenses were met out of a general rate, the erection and maintenance of school buildings were met by separate levies in the 63 tax districts referred to. The North Side (formerly Allegheny) paid a tax for general school purposes which was not assessed in other parts of the city; and the variation in rates for meeting special indebtedness led to still further differences in tax rates.

Although Pittsburgh was redistricted in 1907 making 27 wards out of what were formerly 59,² the old tax divisions remained, and some of the new wards showed as many as six tax rates. For example, in the new eighteenth ward, property on the south side of the narrow

² In 1910 there were 60 old wards, one having been added since redistricting, and three of these were divided into two taxing districts each, making 63 in all within the city borders.

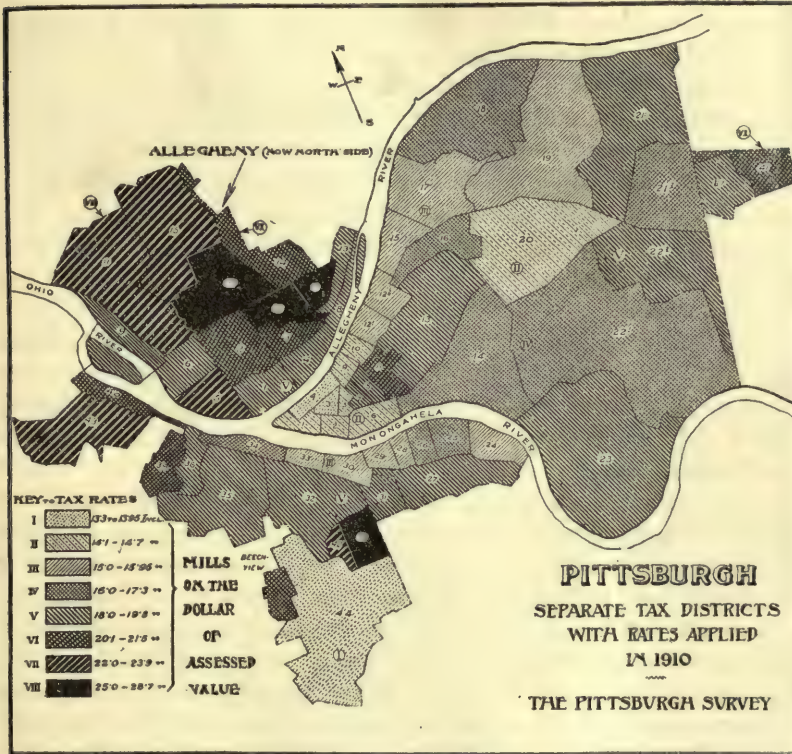
McKinley Park in 1910 paid 13.3 mills while just across on the north side the rate was 28.7 mills—over twice as much; property on the south side of Washington Avenue was bearing 23.9 mills at one place and 28.7 mills at another, while that across the avenue from both of these bore 18.7 mills; property east of Beltzhoover Avenue was carrying a millage of 19.2, while that contiguous and west of the avenue carried a rate of 18.7 at some places and 28.7 at others.

The most important factor in causing the differences in rates, as already indicated, was the separate school district tax. These rates in 1910 were as low as one-sixth and one-fourth of a mill in downtown business wards, and as high as 15 mills in the old thirty-eighth ward, used chiefly for residence. Nor were these differences in school millage mere bagatelles of a sort to be lost in the general tax rates. They dominated the final rates as they spread out over the city, with the result that the total rates in the 63 districts ranged from 13.3 mills to 28.7.

When the table of all these rates, listed in the order of size of rate, is inspected, it is seen that the first nine districts had rates in 1910 under $14\frac{1}{2}$ mills. A reference to the map of Pittsburgh shows that these districts represented practically all of the valuable holdings in the business triangle up from the point, where the rivers meet, and included no other holdings. At the other end of the list there are 17 tax sections which carried rates of over 20 mills, and a glance at the map shows, excepting parts of the 2nd, 3rd and 5th, North Side Wards, that these districts were almost exclusively residence districts. They made up a very large proportion of the residence area of the city. Moreover, with a few exceptions, these high rate areas did not represent or include the most expensive residence districts, those most able to bear taxation. They were mainly small home-owning or congested renting neighborhoods. The old 19th, 20th, 21st, and 22nd wards—all of them large wards, made up for the most part of residence properties which would be classed among the most expensive in the city—were conspicuously absent from the seventeen districts with highest rates.

Considered quite independently of the classification system already described, the ward rates indicated that the heaviest tax burdens in Pittsburgh in 1910 were not felt by owners of downtown business holdings or expensive residence property—but by owners and renters of small houses and tenements.

Classification and Separate Rates Combined. But these factors, classification of land and ward rates, did not work independently of each other. What then was their result, working together? Did the inequalities of the one offset the inequalities of the other, or did they together tend to double up inconsistencies and injustice? To determine this, upon a map showing



MAP 2. SEPARATE TAX DISTRICTS, WITH 1910 TAX RATES.

the nominal tax rates in each of the 63 different tax districts, was superimposed the map showing land classification. In other words, using the various separate tax rates as bases, we went over the city and shaved off one-half the ward rate wherever we found land classed as agricultural, and shaved off one-third the rate where it was classed rural. This left full rates only where the land was classed as full.

The result of this combination is that *actual* rates on assessed valuations varied in the different localities from 7.85 to 25 mills on the dollar. In our full report (see Volume Five, the Pittsburgh Survey), these inequalities were brought out *en masse* by dividing the detailed table of localities and rates into three large groups, placing all realty paying under 12 mills in the first, all paying above 12 and under 16 in the second, and in the third all property paying 16 mills and over. It was found that the low rates were being paid almost entirely by large "agricultural" holdings and expensive residence property, while the high rates were saddled upon small business realty, small residences, and congested tenement neighborhoods. The middle group included principally the downtown business wards, several manufacturing wards and a number of well-to-do residence districts. The conclusion from this grouping was inevitable. The inequalities of the land classification and of the separate ward rates did not offset each other. Rather they tended to accentuate the disproportions.

It may be objected that such conclusions as to the injustice of the tax burdens cannot be drawn until the tax is followed a step further; that the ultimate payers of the tax, not alone the property taxed, must be located. The answer is found in two theories of the incidence of taxation.

The first is the one held by the average business man, and is that the whole tax, both on land and on buildings, is shifted to the shoulder of the tenant. The second, that held by the economists, is that in the main, when both house and ground are occupied by the owner, the real estate tax cannot be shifted, but is borne by the owner. When the owner rents the property to another, the owner still bears the tax on the land. The tax on the house, however, is shifted to occupier or tenant. When, however, tax rates throughout a city are very unequal, as is the case in Pittsburgh, and when the people tend to congregate in certain quarters of the city and seem unwilling to move out to the suburbs, as is usually the case with immigrants, a part at least of the taxes on land that is rented, and all the tax on the buildings, tend to be shifted upon the tenants. So on the theory of the business man and of the economist, the conclusion that the bulk of the local real estate taxes fell upon the renting population, the small home owners, the working people, and the small storekeepers they deal with, is not changed.

As to the first, it is proverbial that the small man carries the heavy end of assessed valuations; and the lack of publicity in Pittsburgh had no other effect than to aggravate this condition. A number of Pittsburgh property owners familiar with local taxation testified to the local working of this tendency to undervalue, relatively, large holdings. In support of the accuracy of the Pittsburgh assessments, however, it should be noted that the assessors appraise buildings and grounds separately, a procedure which is more likely to get at correct market values than by lumping them together. On the other hand, the difficulty of estimating values in a city subject to such revolutionary growth as Pittsburgh was illustrated when we chose a number of districts typifying expensive residence property, small homes, tenements, small business property, downtown business property, and so forth, and had them appraised by several leading real estate men of the city. These figures varied as much from each other as they did from those of the assessors. Moreover, the transfer books in the assessors' office showed that out of 56 transfers in the new first ward in 1910, 34, or 60 per cent, were for considerations of \$1 or other nominal amounts; 25 out of 41 in the second ward, 26 out of 66 in the third ward, and so on. It was impossible, therefore, to any large extent, to compare sale prices with assessments, or determine the percentage of valuation assessed against various kinds of property. With such disparity in estimated values and with the actual considerations concealed in so large a proportion of sales, the extent to which under-valuations were likely to favor the big property owners rather than the small owners depended very largely upon the personnel of the assessing staff, and the publicity given their work. In regard to publicity, very little was done beyond keeping the assessors' books open to public inspection.

Second, while the privilege of appeal for revision of assessments is open to all, it was the large property owner chiefly who benefited by it. The board of assessors in Pittsburgh is also the board of tax revision. At certain times each year the revision board gives notice that it will hear appeals for changing appraisals; and the number of responses to the notice is large. By leafing through the assessors' books, in which the revisions are recorded in red ink, we could see that a goodly number of appeals had succeeded, the revision being downward, of course: and that in the great majority of cases the properties affected were those held by the well-to-do and rich—

large and valuable holdings. This impression was corroborated by the statements of several members of the board. The explanation is not necessarily that such taxpayers have greater influence. Few, if any, of the small property owners ever appear before the board to ask for revision, but it pays the big owners to appeal; real estate men, agents and attorneys for owners scrutinize the assessments closely, watch the papers for notices of hearings, present their cases in the best form, and meet with some success in their appeals, almost as a matter of business.

As to the third point, triennial assessments, under the plan in vogue for years in Pittsburgh, tax rates tend to rise in the second and third year after assessments. Where, as was the case in Pittsburgh, tax burdens are unequally carried, such increases in the tax rate, of course, add new burdens to be borne in the same old unequal ratios. Until 1909, assessments oftener than every three years were illegal. The new act, however, provided for new assessments in any ward where they should be deemed necessary in any subsequent year. Thus the assessors were armed with full power to make annual valuations throughout the city as is done in New York, Philadelphia, Boston, St. Louis, and many other large cities. The department did not make a new assessment for 1911, however, nor for 1912, in a thoroughgoing way as was done for the triennial year 1910.

Fourth, Pittsburgh's exemptions of real estate from local taxation may be divided into two groups, commercial property and non-commercial. Non-commercial property included the long list generally exempted in all cities, such as churches, synagogues, Christian and benevolent associations, schools, colleges, libraries, hospitals, asylums, cemeteries; also city property, such as fire department buildings, city halls, parks, bath houses, police stations, and markets; and county, state and federal property, including court houses, jails, penitentiaries, armories, and post offices.³ In addition, of course, all public streets and alleys are not subject to tax levies. The city markets and the post offices are grouped here although they are commercial in character. They are owned by the government, however, and their profits do not go to individuals.

A more or less unique feature of local exemptions is found in the commercial group. In 1910, Pittsburgh exempted \$22,774,857 of

³ The total valuation of these exemptions had never before 1910 been computed by the assessors.

real estate owned by railroad companies, street car companies, gas companies, telephone, incline plane, water, light and heating companies. This amount is split up among the different kinds of companies, as follows:

Exempt Commercial Property in Pittsburgh in 1907

Kind of Property	Land	Buildings	Total
Railroad.....	\$17,106,701	\$1,805,150	\$18,911,851
Incline planes.....	56,973		56,973
Telephone and telegraph.....	449,918	345,700	795,618
Light, gas, heating, etc.....	988,205	1,952,675	2,940,880
Water companies.....	11,425		11,425
Miscellaneous.....	58,110		58,110
Total.....	\$18,671,332	\$4,103,525	\$22,774,857

These amounts are taken from the assessors' book of exemptions for 1907, as the 1910 book had not at the time of this inquiry been written up.⁴ New exemptions had been added on the records and property recently taken out of the exempt list subtracted; but a careful appraisal of exempt properties was evidently not regarded as of importance, some of the valuations going far back of 1907. The figures, therefore, are considerably under present values.

Sixty-six feet of right-of-way of all railroads operating within the city limits is not subject to local rates. The total of railroad land exempted amounts to \$17,106,701, or 76 per cent of the total commercial exemptions. Practically all is right-of-way. The other 25 per cent of total commercial exemptions is mainly buildings and equipment of railroads and building sites and buildings of the other companies indicated. Of these, railroad property, other than land, in turn represents almost one-third.

The Pennsylvania Railroad owns the largest amount of this exempt property—64 per cent of the grand total. Thirteen million dollars in land and over one and a half million dollars' worth of buildings, sheds and so forth, belonging to it pay no local taxes. The buildings are situated almost entirely on the North Side and include the Fort Wayne depot valued at \$145,000, a number of freight buildings, machine shops, storage houses, offices, and over \$900,000 in tracks.

⁴ Exemptions were listed, however, in 1913.

In the group furnishing municipal service, the Philadelphia Company, which with its subsidiary companies supplies traction, gas, and electricity, is favored most, enjoying an exemption of over two and a quarter million dollars. The eight-story office building on Sixth Avenue, and the ground on which it stands, which were valued in 1910 at \$527,950, paid a tax upon only half this value, \$263,975 being exempt. The large power house and 22.5 acres of land in the old 9th ward North Side, worth \$458,000; the 11 or more acres of land with refining, purifying, retort and engine houses, and office buildings, in the old 14th ward, worth \$888,600; and other property in the old 15th, 20th, and 21st wards, most of this being Consolidated Gas Company property, are totally exempt from city taxation. Exemptions for property of Allegheny County Light Company, Allegheny Heating Company, and Pittsburgh and Castle Shannon Railroad constituent companies are also of considerable size.

Telephone companies are favored also, thirteen-sixteenths of the Central District and Printing Telephone Company's three-story telephone exchange property on Fourth Avenue, valued at \$193,200, being exempt; and all of its eight-story brick office property on Seventh Avenue and Montour Way, valued at \$313,200, besides smaller holdings throughout the city. The Pittsburgh and Allegheny Telephone Company pays no local taxes on \$114,525 of property, mainly office buildings. Incline plane companies, water and miscellaneous companies own exempted property to the amount of \$126,508.

Why these exemptions? The answer takes us back first to the general fiscal policy of Pennsylvania. The state has practically withdrawn from the field of general property taxation, and draws a considerable part of its revenue from the operations of public service corporations. Local taxing bodies, in turn, do not tax the business of the railroads which run through them, nor to any large extent that of local service corporations. This has been a matter of legislation. When we go deeper and ask why real estate and buildings owned by such corporations are lifted, along with their franchises, out of reach of the municipal tax department, we come into a realm not of legislation but of judge-made law.

Briefly, the rule was first laid down by the courts that real and personal property necessary for the exercise of franchises of quasi-public service corporations loses its character as buildings, lands, and

so forth, and is exempt from local taxation. By a special act of Assembly in the '50's, however, all Pittsburgh railroad property was made subject to city taxation. But when half a century later Pittsburgh attempted to assess not only buildings but right-of-way under this act, the supreme court decided that it did not apply to right-of-way. Further, the act of 1859 did not include Allegheny (North Side), and when the two cities were consolidated the supreme court, reversing a lower court, held that the Allegheny freight yards, stations, and so forth, could not be taxed by the greater city for the purpose of liquidating its floating and bonded indebtedness at the time of annexation. Nor has this North Side railroad property paid taxes to meet the current expenses of the greater city up to 1914. Thus it is that at the time of consolidation all of the quasi-public service corporation property on the North Side continued exempt; and in the old city, railroad right-of-way was exempt and so continues. Street railways and incline planes are classed with railroads and are entirely exempt on the North Side,⁵ and in the old city the road bed is not taxed. Light, gas, heating, water, and telephone companies come under the general rule exempting property necessary for the exercise of their franchise.

It may be contended that the exemption from local taxes of stations, warehouses, power plants, and other improvements is justified in that it is an encouragement to the extension of transportation facilities. This contention would seem justified only in a city and state where the public control of public service corporations is such that citizens would receive better service for the same cost or the same service at less cost because of the exemption. Such a principle would lead far afield, moreover. The large distributors of milk, for example—a necessity fully as important as gas or transportation—might well argue that they should be let off from paying taxes on the buildings which house their refrigerating and bottling plants. But whatever the attitude toward not taxing buildings, the scot-freedom from land taxes of these commercial corporations does not seem justifiable. Land values are very largely, if not entirely, created by the community. If there is any agreement at all among taxation authorities, it is that real estate should bear an important part of

⁵ The Pittsburgh Railways Company pays a relatively small gross receipts tax and tax on cars on the North Side. In 1909 the former was \$38,416.99; the latter, \$1,871.24.

local taxes; and yet Pittsburgh makes an exception in the case of over \$18,000,000 in land values and absolves them from carrying their part of the city's expenses. The amount is as great as if the city exempted all real estate in the old 38th, 39th, and 40th wards, four times over.

Summary. To sum up, then, it was found that the dual system of discriminations by land classes on the one hand and ward rates on the other, in vogue in Pittsburgh up to 1912,⁶ saddled the heaviest burden of local taxation upon the man of small means, the small householder, the small renter, and the small business man. It was found also that other important features of the taxation system, having to do with revision, under-valuations, and triennial assessments, aggravated rather than mitigated these inequalities, while the exemption of considerable commercial property made it necessary to impose a higher rate upon all taxpayers. The report therefore concludes with the recommendation of four functional reforms:

First: The schedule of tax rates, untangled to a great extent by the abolition of the district school taxes, should be further simplified and should be kept simple. There are often local responsibilities which are so peculiar to the annexed territory that they should be shouldered for a short time at least by the individuals or community in which they originated, but the period of readjustment should be made as brief as possible.

Second: The machinery for an annual, instead of a triennial, assessment of all city real estate should be set to work. Taxes are levied annually and city budgets are planned annually; the basis for the raising of these taxes should also be made up annually.

Third: Greater publicity of assessments through the printing and wide distribution of the assessment lists, the issuing of reports with maps and diagrams showing assessment methods, the charting of assessed valuations out from the central point of highest value, all are methods which have helped solve the difficulty of maintaining a uniform ratio between assessed valuations and cash values, in other places.

Fourth: Real estate owned by public service corporations

⁶ The Halferty bill enacted in 1911 abolished the tax classification of real estate; in the same year a new school code was adopted which did away with the separate sub-district school tax levies.

should be subject to uniform local taxation. The city's policy is inconsistent regarding this property. In one part of the city it is taxed, while in another it is exempt. The least that should be demanded is uniformity throughout the city. But more should be demanded; more than \$18,000,000 worth of land owned by these corporations should be taxed.

These four changes would round out the radical reform wrought by abolishing land classes and ward rates. They would tend to clear away further discriminations and disproportions due to geographical location, to changes in values from one year to the next, to the human equation in assessing real estate, and to the favoritism heretofore shown to one corporate group of taxpayers.

REDUCTION OF TAX ON BUILDINGS IN THE CITY OF NEW YORK

BY EDWARD POLAK

Register of Deeds, Bronx County, New York.

The movement for the reduction of the tax on buildings and the corresponding increase of the tax on land have been prosecuted with some vigor for a good many years. It has resulted in the entire exemption of buildings in several Canadian provinces, and in various cities of western Canada; and in the United States, in a reduction of the tax on buildings in Pennsylvania cities, Pittsburgh and Scranton.

In this agitation arguments which are undoubtedly extreme have been presented on both sides; arguments which involve far more than the proposed comparatively moderate change in the burden of taxation, of reducing the tax on buildings and increasing the tax on land to make up the deficiency. Those who favor the proposal are apt to attribute to it results which at best could only be achieved by a much more extensive application of the principles of Henry George, than are at present proposed. On the other hand, those who oppose the change often do so on the theory that very much more is involved than the shifting of part of the tax from buildings to land.

When suggesting the reduction of a tax on buildings and an increase in the tax on land it is not necessary to assume that the reduction will be brought about at any particular rate per annum or within any given number of years. The rate of change should depend upon time, place and circumstances. In some rapidly growing city of western Canada, where the tax rate is very low in proportion to the value of all real estate, buildings may be exempted from all taxation at one stroke without affecting values as much as a very small change might affect them in an older city of the United States, where taxes are high in proportion to value. If it were agreed that in any given city taxes on buildings should be reduced and taxes on land increased, it would still be subject for serious discussion as to the rate of the reduction and the time within which all taxes, or one-half the taxes on buildings, should be taken off.

The argument advanced most forcibly by those who object to a differentiation in the treatment of land and buildings is that for a

long time the present treatment of real estate as a unit has prevailed, and that any change would be unjust. Many of these persons admit that if at the beginning of our development in this country we had exempted buildings from taxation, the results would have been better. The city of New York is some three hundred years old. We hope that it will endure for at least some thousands of years. It is therefore in its infancy. An argument that because for one-hundred years or more we have pursued a certain policy we must therefore pursue it forever, seems either childish or so prejudiced as to be unworthy of consideration.

The objections to the reduction of the tax on buildings that it would disturb existing conditions, produce financial panic and ruin many innocent persons, all proceed from the assumption that the change in the rate of taxation on land and buildings is to be too rapid.

It would be possible to make a change so gradually that from decade to decade no shock or disturbance due to the change would be felt. It is not assumed that the changes are to be made so slowly; nevertheless, the fact that it would be possible to make them almost imperceptibly entirely destroys the force of any objections to the principle, based on the disturbance or supposed disturbance of existing values and existing relations. That argument is against some mode of change and not against the proposed change in itself.

Another objection urged sometimes with much violence is that an increase of the tax on land will force the erection of buildings of extravagant height, and thus congest both population and business activity. Unfortunately, in this country we have neglected to provide any efficient regulations upon the erection of buildings in cities. We are beginning to do it. We have some regulations now in Washington, Boston, New York and various other cities, and the tendency is to improve and strengthen those regulations so that we may control the erection of the buildings at least as efficiently as they have long been controlled in the cities of northern Europe. Whether or not the change in the incidence of taxation would intensify the evils from which we now suffer is immaterial. The evils of congested buildings are admitted on all sides; the remedy, regardless of taxation, is proper regulation.

Probably no change in methods of taxation would improve the conditions due to the failure to impose proper restrictions upon the

erection of buildings, and no change could make it worse than it is now in the borough of Manhattan of the city of New York, and to a lesser degree in other cities of the United States.

Since the invention of steel frame construction the history of the development of Manhattan Island has been deplorable. Someone found that he could erect a twenty-story office building and steal light, air and means of access that belong to his neighbors. For a time the building was profitable and the land apparently had a much higher value than before. Others desired to take advantage of the enhanced value of their land and erected similar buildings. When the first building was deprived of light on two or more sides it ceased to be profitable. Some streets were entirely inadequate to carry the new traffic. These results followed the erection of buildings on Manhattan Island of excessive height and which covered too large a percentage of the lot on which they were built. Regulations in European cities are almost always based on street width. They are designed to permit the best use of all the land consistent with the best use by each owner without impairing the equal rights of other owners. The amendments to the New York charter enacted in 1914 as the result of the report of the commission on building heights contain a direction which indicates clearly the intent of the commission to bring about regulation upon these principles. Section 242-a of the charter contains the following direction to the Board of Estimate:

The board shall pay reasonable regard to the character of the buildings erected in each district, the value of land and the use to which it may be put, to the end that such regulations may promote public health, safety and welfare and the most desirable use for which the land of each district may be adapted and may tend to conserve the value of buildings and enhance the value of land throughout the city.

When suitable regulations are in force, the tendency observed in all cities is the erection of buildings of the maximum heights and area permitted by law. This is a most satisfactory tendency, which could only be intensified by a reduction of the tax on buildings and an increase in the tax on land.

Taxation is ordinarily regarded as a necessary evil. This is not true of taxes on land. The evil results of inadequate land taxes are apparent everywhere. Land needed for intensive use is put to a less adequate use, and land needed for immediate use is held at

such high prices that improvers are forced to utilize less well suited land, in advance of any economic necessity. About all our cities, and especially about New York, we find great tracts of vacant land intervening between well built areas. These intervening tracts are often fully developed with streets and all conveniences greatly increasing the cost of city administration, for lighting, policing, fire protection and in other ways. Persons are driven to establish factories and houses on less desirable sites because of the public policy that offers the hope of reward to those who withhold land from use. This hope of reward is seldom fully realized, and only a few who gamble in vacant land draw prizes in this undesirable lottery. The whole community suffers. In every direction the development of our cities is hampered and distorted by this withholding of land from appropriate use and putting it to an inferior use. Our systems of transportation cost vastly more for original construction and for operation than they should because they must traverse sparsely settled territory to reach settled areas. High land values impose an annual charge on the whole community without the slightest compensating gain. A tax on land is a burden on no one save the one who happened to be the owner at the time the tax was imposed. A land tax is like a rent charge, but instead of going into the pockets of private citizens it goes into the public treasury to relieve all citizens from the burden of taxes imposed on all. The higher the tax on land the lower the selling value and the less capital is required for land development. The rent of land blesses neither him that gives nor him that takes, unless it falls into the public treasury. The greater the degree in which it goes into the public treasury for needed costs of government, the better.

Taxes on buildings present an entirely different aspect. In every growing city taxes on buildings tend to check the erection of buildings because capital will only seek investment when the investment offers a reasonable return. Supply and demand determine price, and a tax on buildings must be paid by the tenants of the building just as every other tax imposed on products of human labor must be paid by consumers.

A few illustrations drawn from actual conditions may make the matter more clear to those unfamiliar with the relative value of land and buildings. In the city of New York as a whole the value of land is about 62 per cent of the total assessed value of land and

buildings. Every increase in the tax on land and a corresponding decrease of the tax on buildings will favorably affect all properties where the value of the building exceeds 38 per cent of the total value of land and building. With the exception of the houses of the very rich and a small section of the financial district of the city of New York, buildings when first erected generally exceed in value the land on which they are placed. The highest-priced residential land on Fifth Avenue is worth from \$150,000 to \$200,000 for an inside lot 25 x 100. It is a very costly house which is worth more than one-half the value of such land. Corner lots are worth half as much again, which more than makes up the cost of the building erected on the corner. In the financial section some of the highest priced land, corner included, is worth from \$200 to \$350 a square foot. A twenty-story building of good construction can be erected for \$150 a square foot or less. In the case of industrial buildings, factories, the houses of the moderately well-to-do and the tenements, the conditions are very different. A factory building is rarely erected on land worth more than \$4 a square foot, and a six-story factory costs about \$9 a square foot of the land on which it stands, while a ten-story factory of most inexpensive construction costs \$12 a square foot or more. Usually such a building stands on land not worth more than \$2 or \$3 a square foot. A loft building in Manhattan twelve stories high costs \$30 a square foot. The condition in respect to lofts is abnormal in the extreme because of the failure to regulate building heights. The ordinary six-story tenement house without elevators on Manhattan Island costs about \$8 a square foot while it usually stands on land worth not more than \$4 a square foot. In the other boroughs, a four- or five-story tenement house is still more valuable in proportion to the land on which it stands. In Brooklyn a five-story tenement costing \$7 a square foot stands on land worth perhaps \$2 a square foot. The modest dwelling of two and a half stories built of frame, which costs from \$4,000 to \$6,000 costs about \$5 a square foot and stands on land worth generally not more than \$1 a square foot.

These figures may be hard to follow, although they are presented in the simplest way. The lesson they teach is this, that taxes on buildings are very onerous on tenement dwellers, owners of modest houses and upon manufacturers. Not a few rather arrogant persons who receive ground rents and never did a stroke of work to increase the world's wealth, talk of themselves as taxpayers and the

poor dwellers in tenement houses as persons who pay no taxes. The contrary is the fact. The recipient of ground rent is the recipient of government favor whose taxes are paid for him by others, while the man who lives in the tenement house is charged at least one-sixth of the rent he pays in taxes. To the extent to which taxes on buildings are reduced, to that extent tenants of buildings will save. They will not save in the first year, perhaps, but charges for buildings can only amount in the long run to the usual return for capital. If for the time that return is increased by a lessening of the tax, others will seek a like investment until the demand and supply of buildings meet at the rate of usual return.

Some day society will see that there is no occasion for any tax at all in any community; no buildings of extravagant height or size will be allowed; there will be open space, light, air and access enough, and all buildings once constructed will be protected from encroachment of neighbors upon their light, air and access. The value of buildings will be conserved, and our cities be supported by a rent charge in the form of a tax on land only which will then be a burden upon no one.

For the purpose of this argument, the time within which this beneficent change shall be brought about is not material. The question before American cities is whether they shall be content to suffer forever the ills which now affect them, because their ancestors started in the wrong way, or turn their faces toward the light.

WHAT PROPERTIES SHOULD BE EXEMPT FROM TAXATION

BY JOHN J. MURPHY,

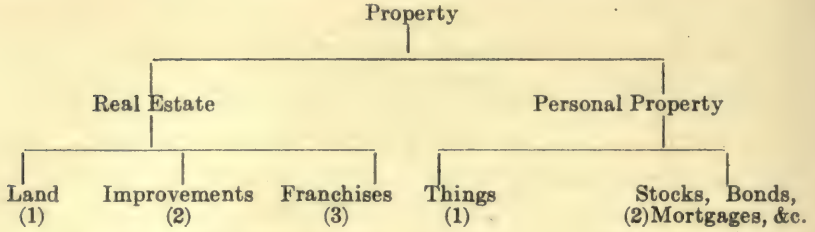
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City of New York.

The question as submitted is one of great scope because it involves the consideration of sources of national, state and local taxation. It is obviously impossible to treat within the scope of a single article of moderate length the various subjects comprised in so wide a field. Free trade and protection, prohibition and license, would be involved in any discussion which attempted to include the entire range of taxation.

Personally, I think it can be shown that most of the subjects of taxation now levied upon by state and national governments are improper bases, if for no other reason than that they are indirect, and that as the people do not know that they pay taxes on them at all, public interest in governmental economy is reduced to the minimum. In a world where most people find the aid of illusion necessary to make life tolerable, it is not wonderful that statesmen resort to devious devices in order to make taxation acceptable to taxpayers. Especially in democracies, is it true that tax legislation follows the line of least resistance, which always is to impose the tax upon someone who can shift it to another, in the form of increased prices, in such fashion that the apparent taxpayer knows that he is not actually paying the tax while the actual taxpayer does not know that he pays at all.

I will confine this article, therefore, to the consideration of what properties should be exempt from taxation for local purposes.

For purposes of local taxation, property is divided into real estate (which includes land, improvements thereon and franchises), and personal property (which includes tangibles and intangibles, the latter term being applied to evidences of ownership which may represent either realty or personal property). If we use the form of a genealogical chart we get a result somewhat as follows:



It will be seen at once that there is an inconsistency in this analysis because the second division of personal property consists chiefly of interests in some form of real estate. Hence if the real estate were fully and fairly taxed in the first place, taxation of mere ownership would be double taxation.

It will generally be admitted that that form of taxation is most desirable which lays the smallest burden upon industry, which least discourages saving and which can be most cheaply and certainly adjusted and collected.

There seems to be a consensus among those who have most intelligently studied the subject that personal property should be exempt, because taxation of it offends every one of the principles of desirable taxation laid down in the foregoing paragraph. There are still a few belated champions of the taxation of personal property even among metropolitan journals but it hardly seems worth while to waste space in refuting their arguments. All our older states have tried at one time or another to raise taxes in this way, only to confess failure. The law inevitably became inoperative and only left a feeling of injustice in the minds of the few persons who were its inevitable victims.

If personal property be eliminated as a proper subject for taxation there only remains real estate. The question arises here whether all the components of real estate are equally desirable as subjects of taxation. Franchises are special privileges granted to corporations or individuals to collect taxes in return for certain actual or nominal services rendered to private citizens. They only have a surplus value when such corporations or individuals are permitted to charge a rate for services rendered which is more than sufficient to pay all charges and the prevailing rate of interest on capital invested. As long as such surplus earnings are permitted, they seem to be proper subjects of taxation, but it would seem a

wiser and fairer policy to limit the rates, which franchise corporations are permitted to charge, to cost of production plus interest.

The subject of the exemption of improvements on real estate has engaged much public attention. One of the wisest men who has written on the subject, Enoch Enslee, a large land owner of Tennessee, affirmed that a wise community would not tax anything of value "which would come to you if it were not taxed but which would leave you if it were."

Most cities are confronted with the problem of providing adequate and sanitary housing accommodations for their poorer citizens. In Europe this problem assumed such proportions that only a municipal housing policy could meet the situation. Yet these cities were at the same time heavily taxing private citizens who were engaged in providing houses similar to those which the municipality was erecting at greater expense. It would seem obvious that every city should encourage to the utmost the expenditure of money in judicious construction. The more buildings there are, other things being equal, the lower the rents which citizens will have to pay. While there may be sporadic cases of over-building, as a general proposition, business judgment may be counted upon to check excessive development in that direction.

It would seem therefore that it would be good public policy, partially or wholly, to exempt buildings. It is frequently urged that to do so would be to place a premium upon enormous buildings, but it seems to me a sufficient answer that the existing system which does attempt to tax such buildings according to their full value, does not prevent this admitted evil. On the contrary it seems to encourage it; paradoxical as it may seem, it is quite possible that the exemption of buildings by putting a heavier tax upon sites, and thereby compelling a more general and uniform development, will prevent what is becoming one of the worst evils in our larger cities.

There is another point of view from which partial or total exemption of buildings would work out relief to enterprising owners. Business waxes and wanes. At one time there may be prosperity with large profits which makes the payment of taxation upon buildings a matter of moderate moment. At another time business is stagnant and the returns on property do not enable the owner to meet his obligations. Then taxation may be a crushing burden. There is an instance in Massachusetts of a mill, which, owing to in-

dustrial developments in other parts of the country, fell into disuse for a considerable period. For a number of years its owner was obliged to pay taxes on the building at a rate only slightly less than when the business was in operation. After doing this for four or five years he blew it up in order to save this annual expenditure. Later, had it not been destroyed, it could have been used.

It is sometimes urged that it would not be fair to absolve owners of buildings from paying their quota of taxes, that they consume public services and therefore ought to pay for them. I think, however, it is now generally admitted by economists that the lot value measures more accurately than the building can the value of the public services rendered in the vicinity, and that hence lot value is a better measure of the amount which the owner ought to pay than the building can be.

That the policy of exemption of factories, mills, etc., is regarded as "good business" is shown by a number of cases in which, sometimes legally, sometimes illegally, the taxing bodies of the smaller towns and villages hold out nominal taxation or exemption as an inducement to new industries to settle there. Such a policy is of course unjust to their older residents and ultimately opens the way to the creation of special privileges, always to be deplored in the relations between the municipality and the citizens.

To recapitulate, taxation of personal property is condemned by the best authorities and discredited by the experience of such bodies as have attempted to enforce it. It puts a premium on dishonesty and encourages favoritism. These faults are not the defects of administration but are inherent vices. It takes from the citizen property in the creation of which the state or municipality has had no hand. For these reasons, and others which it would take too long to enumerate, I believe it should be exempt from taxation.

In regard to real estate, the improvements on real estate are much more of the nature of personal property, in that they are direct products of human labor, than is the land, which is the other element that goes to make up real estate. It is in the public interest that the production of such improvements should be encouraged and not repressed. Exemption of housing would go a much longer way than any program of municipal housing to improve the living conditions of the poorer citizens. I feel, therefore, with

due deliberation, that is the direction which tax reform ought to take.

Of course, the effect of such a change of policy would be far-reaching and the change should be introduced slowly and with due regard for the welfare of the community as a whole. It is not so much a question of the distance which we travel as of the direction in which we shall move.

THE HOUSTON PLAN OF TAXATION

BY J. J. PASTORIZA,

Finance and Tax Commissioner, Houston, Texas.

The Houston plan of taxation was inaugurated by the city council at the beginning of 1912 and has been continued during the years of 1913 and 1914. It contemplates the assessing of land at its fair value, and the assessing of buildings and other improvements upon land at 25 per cent of their value. The effect of this has been to stimulate enormously the investment of capital in buildings and manufacturing industries. The partial exemption of buildings from taxation has caused the erection of modern, sanitary and up-to-date buildings and in time will have the effect of causing the owners of old insanitary buildings to reconstruct them along modern lines or go without tenants. It will have a tendency to prevent the creation of slums and insanitary buildings where people must live or work.

The Houston plan contemplates the total exemption from taxation of notes, mortgages, evidence of debt, household furniture and cash. The effect of this has been to increase the amount of money deposited in our banks and hence make money easy to borrow and to circulate. The bank deposits of Houston have increased \$7,000,000 in the past two years. Certainly this is due, in a measure at least, to the fact that the people who had money knew that if they placed it in the banks it would not be taxed. The banks having greater deposits had more money to lend and thus it was easier for the man without money to borrow, because of the increased quantity of money available.

The effect of not taxing mortgages or notes was to prevent an increase in the interest-rate charged. It is very evident that if the lender of money had to pay a tax upon it that he would increase his interest to the amount of tax, thus making the borrower pay it instead of himself. Every attempt to tax personal property which has been made in the world has resulted in either the owner of personal property hiding same, lying about same, or if it was taxed, has allowed him to shift the tax to the ultimate consumer or user.

Under the Houston plan of taxation vacant lots which have heretofore been used as a receptacle for old tin cans and rubbish

are now being improved and put to their best use. The longer the system remains in operation the greater will be the benefit to the majority of the people. The only man who can complain is the man who is holding much vacant land out of use, refusing to improve it and refusing to sell it at what it is worth for use to someone else.

When the Houston plan of taxation is carried to its logical conclusion, people will begin to realize what the millennium upon earth means.

When elected tax commissioner of Houston in 1911, I found a great mass of taxpayers disgruntled and dissatisfied with the management of the tax office. I soon discovered that each taxpayer thought his neighbor was getting his property assessed for less than he was, so in order to keep even would resort to all kinds of misrepresentation in order to get his own assessment lowered.

I took a number of pieces of land and blocks from each ward in the city, tabulated their assessed value and in a column alongside placed what it was generally believed each piece of property was worth for sale. The result showed some pieces of land or lots were assessed as low as 8 per cent of their value, while many small homes were assessed at more than their value. I readily saw the cause of all the dissatisfaction and could well understand why taxpayers would come up to the office, call the assessor all kinds of hard names and declare that the city was a robber and a thief. I set about to remedy this dangerous spirit which was being manifested by the people almost to the point of revolution by a decision to equalize the assessed values of land with reference to the ownership. Having met, fifteen years before, a man by the name of Somers in New York, who was then formulating a series of tables which were intended to be used for calculating the value of the various lots in a block when the price per front foot of the middle lot on the four sides of the block was given, I communicated with him and learned that he had sold his right to the Manufacturers' Appraisal Company of Cleveland, Ohio. Getting in touch with these people I soon learned that the Somers system if properly applied would equalize the values of real estate of Houston, so upon my recommendation the city council made a contract with them. They had nothing to do with placing values upon our real estate, mind you. I got these values by securing the coöperation and assistance

of the property owners themselves, together with a select committee from the Chamber of Commerce and the Houston real estate exchange; all of these men working two afternoons each week without pay.

The entire assessment of the city of Houston for the year 1910, which was the year preceding my election, was \$63,746,000. The Somers system was applied to the business district only in 1911, which gave us an increase of \$13,500,000 in land value assessment alone. The system was applied to the entire city in 1912, which added \$19,000,000 more of land values alone. This gave us a total assessment for 1913 of a little over \$96,000,000. From this you will see that the total assessments of the city of Houston from 1910 to 1913 were increased through this equalization \$33,000,000 or over 50 per cent. This was done in spite of the fact that we adopted what has since become known throughout the United States as the Houston plan of taxation, which is more a plan of tax exemptions than that it is a plan of taxation. That is, we exempted totally from taxation all cash, mortgages, notes, evidences of debt, household furniture and such personal effects as horses and buggies, watches, jewelry, sewing machines, pianos, etc., and we exempted all houses, machinery and other improvements upon land to the extent of 75 per cent of their value; that is, we assessed them for only 25 per cent of their present worth.

One would think that all these exemptions would have reduced our assessment, but our records show for themselves, and also prove that the lands of Houston had been grossly undervalued for assessment purposes. The result of this low taxation of land had become manifest in high rents. Think of it! In a city of less than 100,000 people, merchants were paying a rental of \$1,000 per month for a store of twenty-five feet front. Five- and six-room cottages were rented at from \$35 to \$40 per month and five-room apartments in flats at from \$45 to \$60 per month. Rent was so high that many people who wanted to locate here, after coming, went away again.

After two years of application of the Houston plan of taxation we have this result:

Rents have fallen 20 per cent and will fall more in certain cases where they were unduly excessive.

A published statement that we would not tax money increased our bank deposits \$7,000,000 in two years. Our building permits

increased the first six months, 66 per cent, and for the first year, 51 per cent.

The great inequality of previous assessments was shown by the fact that when the year's work was done we discovered that over 5,000 people paid less taxes than they did the year before, notwithstanding that a total increase of \$33,000,000 had been added to the rolls.

Formerly a taxpayer would come up and perjure himself by lying as to how much cash he had, the value of his household furniture or whether or not he had any mortgages or credits. Now he comes up to the office and signs his assessment, made out and the price placed there by the office, and unless he can prove that this price is more than his property is fairly worth he has no recourse except to sign his assessment or it will be signed for him by the assessor.

We have just completed our assessments for the year 1914 and out of 12,000 taxpayers only fifty refused to accept our prices as placed upon their real estate. Even if these fifty have a just cause for complaint, which will be investigated, it certainly goes to show that it is a very small percentage, and it also proves that the people are satisfied with the Houston plan of exemptions and the Somers system of equalization.

THE HEAVIER LAND TAX

BY ALLAN ROBINSON,

President, Allied Real Estate Interests of the State of New York (Inc.).

Criticism of present methods of taxation is not confined to the so-called single taxers, but the angle at which the followers of Henry George view the subject is different from that of the anti-single taxers. The former believe that there should be no taxation at all, and are restive under the designation, which for want of a better name, has been given them. The single tax, as they think of it, is not a tax at all, but merely the fiscal means for bringing about common ownership of land. If land, not owned by individuals, is permitted to pour its accumulating earnings into the lap of a receptive government, no one will have to pay any taxes. The opponents of the single tax, while acknowledging that our tax methods work injustice, do not admit that the remission of taxes would work the benefits claimed for it. So far as I am personally concerned I frankly say that if true democracy is to come it must be through the imposition of the cost of government upon every person in the community, apportioned to the benefits each receives. The burden of taxation, in other words, is the necessary equipment that each citizen needs, if he is to qualify in the race of life. The anti-single taxers would not relieve anyone of the burden of taxation; they would distribute it equitably, or as equitably as it can be distributed. The fact that no satisfactory scheme for this equitable distribution has yet been proposed, does not carry with it the conclusion that none can be found, or that not having found the right kind of a tax, there should be adopted the scheme for abolishing all taxes, and making land support the government.

I do not propose at this time to discuss the theoretical questions involved in the adoption of the single tax, or the doctrine of common property in land. These questions are important and are occupying a large place in current thought and discussion. I shall merely content myself with saying that as a practical matter, common ownership of land would in my opinion inevitably lead to higher rents than those which private landlords obtain, and for this reason if for no other, a system which covers into the public treasury

the entire ground rent of land would not materially benefit the people at large. But the particular purpose of this article is to set forth the facts, so far as they are available, relative to the operation of heavier land taxation in certain cities in northwestern Canada and the United States. The single taxers do not hope all at once to destroy the capital value of land by taking its entire earning capacity in taxation; they are looking forward toward a gradual increase in the land tax, a little this year, a little more next year, and so on, until the goal is finally reached. Whether or not they ever reach the goal depends on the results attending the operation of the gradual increase in the land tax, and we are now fortunately in a position where we may see and analyze these results in some localities.

The following cities in northwestern Canada have been experimenting with the heavier land tax for several years: Victoria, Calgary, Edmonton, Lethbridge, Medicine Hat, Regina, Moose Jaw, Saskatoon, Prince Albert, and Vancouver. Building permits in these cities for the years 1912 and 1913 show the following.

	1912	1913	1914
Vancouver.....	\$19,388,322	\$10,423,197	\$2,973,335—6 mos.
Victoria.....	8,208,155	4,037,992	1,572,190—4 mos.
Calgary.....	20,394,220	8,619,653	1,644,100—5 mos.
Edmonton.....	14,446,819	9,242,450	
Lethbridge.....	1,358,250	504,954	
Medicine Hat.....	2,798,764	3,850,082	
Regina.....	8,047,309	4,018,350	1,355,120—6 mos.
Moose Jaw.....	5,275,797	4,528,470	407,300—5 mos.
Saskatoon.....	7,640,530	4,452,845	301,950—5 mos.
Prince Albert.....	2,008,000	1,380,390	144,365—6 mos.

It will be noted that Medicine Hat alone shows an increase of building activity, while the rest indicate a remarkable decrease. These figures are instructive because they are quite the reverse of what the single taxers had led us to expect. For several years they have been pointing to Vancouver and the other cities as proof of what heavier land taxation would do to stimulate building. It is quite true that up to the year 1912 all these cities showed gains in buildings, and the single taxers claimed these gains for themselves. Now that the tide is ebbing we hear little or nothing about the land taxes in the Canadian cities. But how about other Canadian cities where they have no tax exemption of buildings?

Montreal increased its building permits from \$19,641,955 in 1912 to \$27,032,097 in 1913. Fort William increased from \$3,746,565 in 1912 to \$4,029,965 in 1913. Toronto in the same period showed only a small falling off—\$27,401,761 in 1912 and \$27,038,624 in 1913.

The same general tendency is shown in the bank clearings for the years 1912 and 1913. Of all the cities above enumerated where heavier land taxation is in operation the only one to show an increase in bank clearings in 1913 over 1912 is Regina. In Toronto, on the other hand, bank clearings increased from \$2,159,230,376 in 1912 to \$2,181,281,577 in 1913. In Montreal the increase was from \$2,844,368,426 in 1912 to \$2,880,029,101 in 1913. Fort William increased its bank deposits nearly \$9,000,000, while St. John fell off about \$6,000,000 in the same period.

The general conclusion to be drawn from these figures is that the heavier land tax has not kept the cities of northwestern Canada from feeling the effects of business depression, while other cities without such heavier land tax have, in the main, gone forward. We need seek no further for the reason why the single taxers have not been directing public attention to northwestern Canada since 1912. Commenting on this situation, Professor Bullock of Harvard said:

If the single tax, rather than the previous period of flush times, accounts for the increase in building operations from 1909 to 1912, it must accept the responsibility for the slump of 1913 and 1914. It is a poor kind of magic that can be used only to account for prosperity and proves useless in a season of adversity.

With the decline and fall of Vancouver and its sister cities as examples of what heavier land taxation would accomplish, the attention of the public was adroitly directed toward Houston, Texas, where a heavier land tax plan was put into effect in 1912. The finance and tax commissioner of Houston, J. J. Pastoriza, was a follower of Henry George, and a believer in the single tax. The figures furnished by Mr. Pastoriza and published widely in this country and foreign lands seemed to justify the claims that were made that Houston was benefiting greatly under the operation of the heavier land tax; but a careful examination of the facts shows that Mr. Pastoriza's figures are not correct. He claimed an increase in bank deposits in Houston of \$7,000,000 in 1913 over 1911. These figures he reached by taking the bank deposits of June, 1911, and comparing

them with the bank deposits of September, 1913. Had he taken the deposits of September, 1911 he would have found \$2,500,000 more in the banks than in June which was the active business period. Furthermore he neglected to include the deposits in the state banks in his 1911 figures while including them in his 1913 figures. As the net result of these two mistakes we find that he is more than \$5,000,000 out in his reckoning. In order that an accurate and valuable comparison may be made the same period in each year should be selected. If we take the September period we find the following bank deposits in Houston in the years 1909 and 1913 inclusive: 1909, \$27,707,497; 1910, \$31,256,000; 1911, \$36,550,000; 1912, \$41,424,000; 1913, \$38,112,000.

Examination of these figures discloses the fact that bank deposits increased over \$9,000,000 in the two years immediately preceding the adoption of Mr. Pastoriza's heavier land tax plan, and less than \$1,600,000 in the two years succeeding it. The value of the building permits issued in Houston in the first six months of 1913 was \$3,017,797, and in the first six months of 1914, it was \$2,067,574, a falling off of nearly one-third. There is surely nothing in these figures to justify the claims of the single taxers, and this may account for the sudden shutting off of the stream of news that flowed out of Houston up to six months ago. If there is any doubt about the utter absurdity of the single taxers' claims for what heavier land taxes will do it will easily be dispelled by comparing Houston with other cities in Texas which have not had such a tax. Fort Worth, Dallas and San Antonio have each fared better proportionally in growth and in bank deposits than has Houston since the latter city adopted Mr. Pastoriza's plan.

Irrespective of the theory of the single tax, or of the heavier land tax, it is clear that there is nothing in the late history of Houston or of the Canadian cities on which to found a claim that a heavier land tax has beneficial results, or is an improvement over our present system of taxation. Granting that our present system is defective, it seems clear that the heavier land tax is likewise defective, and that the real solution of this perplexing problem has not yet been brought forward.

ANNUAL REASSESSMENT VERSUS THE UNEARNED INCREMENT TAX

BY ALFRED D. BERNARD, LL.B.,

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The basic reasons for the taxation of real estate for local purposes are that the local government especially safeguards the local property, its expenditures are largely beneficial to real estate, and in its expenditures more or less attracts a community, which becomes prosperous under good government and wise expenditures; that the community grows, thus creating a demand for land; that the real estate assumes a value which is given to it by the community; that the growth of the community creates constantly new and changing values, shifting utilities for land, and in many instances increases the values; that the land being a tangible expression of the power of the community to utilize, land may be said to have a community value, which it has received from the local government, and therefore should be taxed.

On this basic proposition, the average intelligent subjects of the United States are apparently unanimous. But there is a great diversity of opinion as to whether real estate should bear the burden of local taxation or whether the tax should be confined to the land with a scaling valuation for improvements, or whether the improvements should be eliminated altogether. Moreover there are advocates of taxing what is termed the unearned increment, which, if the writer correctly understands, is intended to exact from the landowner a portion of the difference between the market values of his land at intervals, on the theory that the increment attaching to the land is through no effort of the owner, but through the growth of the community.

Assuming that there is such a thing as an unearned increment attaching to land, is it fairly a subject of taxation? And if it is a subject of taxation, is it fair to tax this so called unearned increment, and also tax the land at the various periods of reassessment at the then market value of the land? And if this proposition shocks the spirit of fairness, will an annual reassessment be a fair substitute for the unearned increment tax?

The fundamental of all taxation is equality. Quoting from the constitution of Maryland, Article 15 of the Declaration of Rights, following the proposition laid down by Adam Smith in his *Wealth of Nations*, published originally in 1776, ". . . every person in the state or person holding property therein ought to contribute his portion of public taxes for the support of the government, according to his actual worth in real and personal property."

Before attempting to tax the unearned increment, we should make a practical effort to see if we can ascertain what it is, and a few illustrations based on fact may be timely.

In 1898, Smith bought 1,000 shares of Atchison common at \$13 per share, and locked it up in a safe deposit box. For a few months after his purchase it fluctuated around buying price, but it never got below \$13, and when he sold out at one hundred per share, the contribution of the public and the very excellent management of the road by way of unearned increment amounted to \$87,000 less commissions.

The same day Brown bought a small lot on H Street, improved by an old dwelling, for \$10,000. It was hard to rent at \$500, and Brown studied the situation, and concluded that the conversion of this property into a modern shop would be a wise move. He, accordingly, spent \$3,000 in introducing modern heating, plumbing, lighting, a swell store front and creditable decorations. When he finished his repairs he had \$13,000 invested in the property. By the exercise of patience and tact, he finally succeeded in getting a tenant who took a long lease at a scaling rent starting at \$600 and advancing \$100 a year, so that, in 1909, the property was producing \$1,600 per annum; the pioneer tenant in the block was doing a splendid business, and other shops had followed him; the utility of the block had completely changed in ten years, and the tenant, feeling that his business was growing rapidly, bought the property from Brown for \$30,000, the tenant and Brown both agreeing that the property was actually worth \$20,000 at the time of the purchase, but Brown thought that it would ultimately go to \$40,000, the seller discounting, and the buyer purchasing the future increment.

In this instance, the daring Brown in risking his capital, the energy of the tenant in pulling business another block, the contribution of the ever increasing public by way of the so called unearned increment produced \$17,000.

The day Smith sold out he met a friend who had a perfectly sure thing in beer selling around "80" but going to "120" before spring, and Smith bought 1,000 shares. In three years that concern went into the hands of a receiver, and Smith lost \$70,000.

One more incident. The day Brown sold out he felt pretty chesty, and took his wife out in a "demonstrator." They passed a very swell looking suburban plot, beautifully shaded, with a large compelling house, on which was a bargain sign. The property was being shown to a prospect, so they went in. The wife raved over the shade trees, thought the outlook a dream, and the perfume of the hay field opposite the one thing necessary to complete her happiness. Twenty thousand dollars would buy it with five acres of ground and the house cost over \$20,000 to build. It was a bargain, how could the owner be so foolish as to part with it? Brown bought the property, spent \$2,000 renovating the house, and installed Mrs. Brown in her new paradise, opposite the hayfield view.

The next spring the owner of the hayfield sold it, and before the summer was over a row of two story houses of exasperating monotony was shutting out the beautiful view, and the perfume of the hayfield was punctuated by an odor of fresh plaster and burning pitch. Mrs. Brown had hysterics and her physician ordered her out of the house with dire penalties for disobedience. Brown sold out for \$7,900, the value of the lot; the mansion house was torn down and two story houses erected. The contribution to this unearned increment was minus.

Incidents like these are the practical premises from which the thoughtful student of economics must draw his deductions. Smith's friends called him a master of finance, until he bought beer common, then his friends said "————." Brown was regarded likewise by his friends before and after.

Now if the city exacted a part of Smith's profit on the Atchison deal, and Brown's profit on the real estate deal, ought it not fairly return Smith a share of his loss in beer common, or Brown's loss because he could not see that the suburban property he had purchased was obsolete? Such an argument brings the blush of shame to the most ardent student of social economics, yet it is the fundamental principle of taxation that a man should pay taxes on his worth in real and personal property.

But, again, the unearned increment taxpayer is willing to let Smith go free, on the theory, perhaps, that his profit being a gambler's

profit, he is liable under the law of averages to lose out on his next deal, or perhaps he is not able to fix the community value attaching to a stock jobbing transaction. Can he fix it on the realty deal?

Let us analyze this transaction. Brown's paper profit was \$17,000. Against this should be charged the taxes, repairs and interest on his original capital and the fund should be credited with the rent; so that the actual profit was approximately \$15,000, of which \$5,000 was increment, and \$10,000 a tax the tenant paid to the landlord for the privilege of being owner of the good will of the place.

If this increment were solely the contribution of the community, why does one merchant succeed and another fail? If this increment is solely the contribution of the community, why do values shift with shifting utilities? And why in the average large city have the increments attaching to suburban property been largely if not totally offset by the shrinkages in the inside residence districts?

We believe there is an increment attaching to land in certain locations due to the natural growth of the community, which affects its selling value, but the community rarely localizes it. The best corner lot in a given city is seldom the geographical centre or even the centre of population, but is largely due to the enterprise of individuals, the power of advertising, and the consent of the community to be drawn to a given point for a purpose, and that purpose is usually a belief that an advantage may be gained at the particular point.

If ten merchants would open as many large department stores at spaced distances on Fifth Avenue in New York, between Union Square and Central Park, with ample capital and make generous advertising expenditures, the chances are, the five to the south would fail; but if the ten would agree to locate at or near Broadway and Forty-fourth Street, it is more than likely that the whole retail business district of New York would be shifted twelve blocks north; land values in the new district would be quadrupled and the present district would be cut in half. The community would contribute to the increment of the new section by seeking it to buy goods, but the moving factors in the enterprise would be the persons who risked vast sums of money to create the new district.

The owner of a farm on Long Island sees the city grow steadily towards his property. So long as it is a farm its highest market value is expressed in its capacity to produce; hence its utility fixes its highest market value. As the city approaches it, it assumes a

potential or speculative value, in that it will soon be ready for a subdivision, and its value increases beyond its farming utility value. Yet it is not ready for the market and the chances are that a subdivision would be a complete failure. But with the growth of the city it becomes ready for suburban development and the owner sells out to a promoter, who interests capital and capital takes a business risk and is successful. The increment undoubtedly attached to the farm with the growth of the city, but until it was developed it was a farm, and the development required individual effort, capital and management to make it successful. The owner may or may not have made a profit, notwithstanding the apparent paper profit the sale showed on the original cost, as it is a well known fact that many a rural tract held for development has been held so long that the paper profit did not equal the interest the owner would have realized if the cost of the property had been invested in government bonds at 2 per cent.

One more illustration before passing to the main subject. The owners of the respective corners of the block on Main Street erect imposing sky scrapers, thus increasing the traffic on Main Street and the inside lots double in value. This must surely be an increment due wholly to the community. But after the office buildings are twenty years old, the owners find that they will not pay their fixed charges, and they have erected monuments to their own asininity. The owners of the lots improved by the old shacks are offering expressions of sympathy but no rent. The gains in the middle of the block are largely offset by the losses on the corners.

This brings us to the main argument.

If there is any increment attaching to land which may be said to be unearned, it does not attach over night, but is a growth, which is the expression of the growth and buying power of the community. No one would advance the theory that a successful merchant should give up a share of his annual profit to support the local community, but all will agree that he should contribute an equal percentage of his worth, whether it be expressed in real or personal property, and while no one would advance the theory seriously that a professional man should yield up a portion of his annual income to support the local government, yet all will agree that if he invests a part of his earnings, it becomes capital to him and the investment should be taxed.

So with real estate. It is the tangible expression of invested capital, and because it is tangible, a word which has the same root as touch and tax, it has become the target of the community collector. It represents the whole or a portion of the owner's worth and should bear its proportion of the cost of government. Under annual reassessment, if it increases in value, the community gets the taxable percentage of the increment plus the capital invested; if, on the other hand, it depreciates in value, the owner is correspondingly worth less, and the shrinkage is evidenced by the amount of the assessment. But he is still paying his fair portion of the burden of government.

This argument is sound and has its basic thought in equality, which is equity. The inequality does not lie in the amount of the increment, but in the lack of the necessary machinery to properly appraise it, and the machinery to review the appraisement from time to time so that the owner is paying on its present market value, and not on a value fixed at a remote period.

Now assuming the constitutional provision is sound that the individual must pay on his worth and not on his earning power or the earning power of his capital directed by his energy, the practical question for the municipality is: *What is the individual worth?* To ascertain this, that which he owns must be competently appraised; and to competently appraise and review the appraisement, the taxing power must provide the means; and when this means is found and furnished, if it is competent and sufficiently active, the fair market value of the wealth of the subject, whether expressed in unimproved land or real estate or certain forms of personalty, may be annually ascertained, and uniformly and equitably taxed; thus yielding to the support of the local community a percentage of the original capital, plus the annual increment, less the annual shrinkage.

In the judgment of the writer this is all the community has a right to demand. And if the demand is fairly met, the community will be more prosperous, and the burden of taxation more evenly distributed and less onerous, than by special taxation of the brains and energy of certain individuals who happen to be successful money makers.

Will annual reassessment be a fair substitute for the increment tax?

In the larger cities values are constantly changing, due in part to the growth of the city, the shifting of utilities, and the caprices of the citizens. Real estate has cycles of prosperity and adversity, and

values rise and fall with the market. If values were solely the expression of the number and buying power of the community, they should gradually rise as the community grows. But those of us who have real estate holdings are sadly aware of the fact that need, desire and caprice constantly change values.

These changes are most rapid in the commercial centres and in the suburbs, and are generally downward in the intermediate points. To properly appraise values so that an equitable basis of assessment including the increment may be had, it is, in the writer's judgment, necessary that the real property in all large cities, and such personal property as may be locally the subject of taxation by law, should be annually appraised.

While the average thinking man will generally approve annual reassessment in any community where the annual increment is more than the cost of ascertaining its value, there are a number of questions arising as to how unimproved land should be appraised for local taxation. Any number of plausible and ingenious arguments have been advanced whereby land which produces no return in rent should be appraised at a different value or taxed at a different rate from improved property.

A number of cities have urban, suburban and rural rates of taxation, with tests of classification, others with a uniform rate have special or partial exemption features for vacant land. All these features are, in the judgment of the writer, wrong in spirit. The object of the taxing power is to secure revenue, its desire should be to secure it *by taxing value and not earnings*. While the rent an improved property will produce is, if properly capitalized, a safe guide as to the value of the whole, and where the improvements are adequate to the site, the difference between the cost of the improvement, less deterioration and the value of the whole, will fairly represent the land value; still if the value is in unimproved real estate, it is because it has a potential earning power if improved, and present realization value if sold. If the citizen owns \$10,000 worth of real estate, it does not make any difference whether it is in a downtown warehouse or an undeveloped suburb, the rate and assessment should be the same.

The argument that the owner of unimproved land gets no revenue, and therefore should have a special rate, creates the single taxer and increment taxer. If the unimproved real estate is worth

its appraised value, it is because the seller may in normal times under normal conditions realize on it. And if he does not realize, it is because he believes that it is going higher than interest on his present realization value, which is an increment.

Another subtle argument which the owner of unimproved land advances is, that if land is taxed at its full value, it brings about an over-improvement of site, creating ruinous competition in improved properties, causing vast wastes in capital, and the withdrawal of capital from real estate investment, unusual vacancies with attendant demoralization.

This is undoubtedly true where the community undertakes to penalize land out of use by making it the sole object of taxation. Thus it is now becoming apparent in so called "single tax communities" that the penalization of land and the exemption of improvements have created an over-production of improved properties, not only forcing values downward, but causing the withdrawal of capital from real estate. And here let us state parenthetically, without any attempt to be academic, that there is no such thing as the survival of the fittest in real estate. When values are depressed by reason of over-production, in warehouses, all warehouse property is affected. When there is an over-production of shops, all shop property is affected, and on through the list. Too many properties to choose from makes a choice uncertain, and the purchaser withdraws from the market.

But the practical answer to this argument lies in being able to distinguish the real value. Where a vacant lot in the heart of the city is held out of use, it cannot be because of over-production, but because the owner is unwilling to improve it, unable to satisfy his mind as to how to improve it, or because the increment is in his judgment more than the increment would be plus the interest on the invested capital to improve. Such an owner should pay on real value. Where there is a doubt as to whether the location of the land is such that its highest utility is apparent, this will be reflected in its true value, and should be treated accordingly. Thus in a semi-residence district in a transition state, if the improvements have anything like a construction value, the land has a residence value only, and if the land has a business value, the improvements are obsolete. In either case the whole will fairly balance and should be so considered. But to force a business value on the lot, and at the

same time carry a construction value on the improvement is manifestly unfair. Hence we see in all the large cities this particular class of property bearing more than its share of the taxable burden, requiring skill and judgment in the assessor to differentiate. There is a section, however, in every large city where the question of local taxation is acute, and conditions are hard to meet.

So long as a tract of rural land remains undeveloped, it should not be appraised for taxation for more money than it is reasonably worth as undeveloped property, notwithstanding that the adjoining tract may be developed. To make this clear, if Blackacre farm sold three years ago at \$1,000 per acre, and the owner laid it out into building lots and sold out at the rate of \$5,000 per acre to one hundred customers after three years of hard work and the expenditure of large sums in development, Longacre, the adjoining tract, is not worth over \$1,000 per acre plus the increment which attaches by the development of Blackacre, which may not be an increment, but indicates that the demand for lots was not up to the supply; notwithstanding that single acres might be marketed for \$3,000.

In many cities the student of taxation problems will find on one side of the road assessments at \$1,000 per acre on undeveloped land, and on the opposite side assessments around \$4,000 per acre on building lots, which would apparently be entirely out of harmony. But the average suburban development must be marketed in lots at 500 per cent profit over original cost, to provide for loss of area in streets and alleys, cost of introducing the various services, providing streets, drainage, advertising and selling cost, interest on the investment and a hundred little things which creep into the cost of marketing a suburb.

A still more difficult problem than the above confronts the assessor, and that is the appraisalment of land in bulk in the developer and the individual lot owner in the same subdivision.

So long as Blackacre is a farm it has an acreage value. As soon as streets are laid out and the lots staked off, it becomes a subdivision; a pioneer price is placed on each lot, and a number of the choice lots marked sold whether they have been sold or not. The assessor has no difficulty in getting the asking price, and institutes comparisons with adjacent developments. He may reach a conclusion that the lots are priced too high and will not bring the asking price, and will turn them in at say 70 per cent. The lots are figured at 500 per

cent profit and the owner has concluded that he will be ten years working out. He promptly appeals, and makes this argument:

It is true I paid \$1,000 per acre for this farm, and that I have sold five lots out of two hundred at \$5,000 per acre. Notwithstanding this profit I will lose money unless I sell out all my holding in ten years. But if I sell out now I will make money at \$3,000 an acre notwithstanding my expenditures. And while I want a thousand dollars for one fifth of an acre of land, I will sell you all I have at \$3,000 per acre, or 300 per cent on my original investment, which would cut down this assessment to 60 per cent of the sale price of the lots.

Now how are you going to meet it? You cannot. If the land is worth \$1,000 per acre undeveloped, and the owner after spending \$1,500 per acre on it is willing to sell out at \$3,000, it is because as a wholesale proposition that is its value. Therefore the assessor will start in at, say \$3,000, and each year advance the assessment as the lots are sold.

Such a treatment is, in the writer's judgment, the only equitable appraisement. It rarely happens that suburban land is advantageously marketed without large expenditures in buildings to establish the atmosphere. These establishments are frequently sold to people who are desirable socially at large monetary losses, which losses are capitalized up against the remaining lots. While a number of developers think a low assessment a desirable asset in marketing the land, it often presents to the enquiring mind of the prospective purchaser the question that either the assessor does not know what he is doing or the purchaser is getting trimmed unmercifully, and when he reaches the latter conclusion, he is no longer a prospective purchaser.

While these values are equalizing themselves, the individual assessments on the lots bought and improved should not be materially changed, until the whole subdivision may be said to be fairly established, and then increase them uniformly at intervals, until the full value of the individual lots has been reached, which will be usually around or less than the original selling value. The equality expert goes through the books and points the finger of scorn at the supposed under assessments. But are they under assessments?

The individual lot buyer is to a certain extent the tool of the promoter, and if there are not enough of them to establish the particular suburb in a reasonable time, the values recede, and the developer cuts his prices to quicken the market. Thus the pioneer

purchaser must either help the developer or the developer will undersell and thus cheapen the pioneer's purchase. And if he takes this risk in becoming a pioneer, can his holding be said to have a market value equal to its purchase price, until approximately all the lots are sold and the property developed beyond the experimental stage?

The last feature of the subject we can touch on in this article, is the question of land contours, soil formations, grades, etc. If the expression of value is fixed by the sale of one or more lots in a suburb, the character of the land is important; and the assessor, in seeking to value the lots uniformly, must take these features into consideration. A gentle terrace a few feet high may be considered desirable. If the land has to be filled up, the fair cost of filling the same should be deducted, plus the cost of the extra foundation of a building reasonably adapted to the lot, if it be found that the fill was below foundation depth. If on the other hand there is a hill with an outcropping of rock, which cannot be treated, the question of moving the rock must be considered. Where the lots run to a swamp, they must be separately treated, and it frequently happens that such lots are practically valueless in low priced subdivisions. We have seen adjoining lots of the same shape and size, with vastly different values per foot, because of these minor factors. So that uniformity in assessment expressed by the foot or acre must be the expression of value, and not the answer to a sum in arithmetic.

In conclusion, most real estate owners are community grouches, and a happy taxpayer as rare as a genuine Rembrandt. He feels the burden which is ever increasing and the tendency of modern government to exempt all forms of personalty and thus double the burden of real estate.

No one would think of buying a piece of real estate, which is not a subject of larceny, without properly recording the deed. But because of lax laws valuable personal securities, which could be stolen, are unregistered and their owners often unknown. Against this the argument goes to heaven, that business is the life of the government, and taxation at the source is taxing business.

But here comes the inexorable law of supply and demand. The cotton lies unpicked on the fields, because there is an over-production of cotton. From the homes of the poor comes the wail, "we cannot afford to buy meat." Why? Because the land is too high to be utilized for cattle production. The farmers have found new utilities for the

land; the country is being divided into building lots and truck farms; arid plains are being irrigated into orchards; apples are worth a fifth of a cent to the producer and 3 to 5 cents to the consumer, the consumer and the producer are both groaning under the weight of taxation, and the railroads carrying so much water that they have no room for apples, and three or four middlemen untaxed making a profit out of that innocent apple before it gets to the 3 cent buyer.

Let the taxation theorist who sees one side boil it down to its final analysis, looking at it from every angle, and he will find that the ultimate security of the bulk of the wealth of the country is in real estate, that the fictitious or paper wealth of the country is the capitalization of the individual effort to utilize either the forces of nature or the real estate, expressed in franchises, as well as actual ownership of land and its appurtenances; that the fictitious wealth is more than the actual; that generally it is untaxed, but generally carries control; that this control is not only a holding force but an influencing force, not infrequently a corrupting force; that the taxing power requires other sources of revenue than real estate; that the so-called unearned increment is a mere cipher in the unthinkable figures which express the wealth of this country; that, as real estate is the only tangible expression of wealth, its value must be stabilized, or the country will go the way of ancient Rome; that land values may only be kept up by the lure at least of an increment more than the average interest yields; that before you attempt to tax the increment, you must first determine that it is unearned, which is a very difficult thing to do, and that to tax it is to advertise it, to advertise it is to encourage a gambling scheme, for, viewed from its rosier aspect, it is a gamble; and lastly, that real estate speculation does not increase values, but tends to make them uncertain; and a national depression in real estate will have as disastrous an effect on the body politic as a whole as an over-production of cotton or a scarcity of beef.

MUNICIPAL TAXATION IN RELATION TO SPECULATIVE LAND VALUES

BY ADAM SHORTT,

Civil Service Commission of Canada.

Whatever may be said of the ultimate basis of national or state and provincial taxation, municipal taxation, at least, is essentially based upon the fact that where increasing numbers of people find it necessary to live together in a more or less limited area, it is essential for elementary safety and comfort that they should undertake to maintain certain services in common. These needs expand with the increasing size of the civic centre and the developing wants of the citizens. After providing for the primary and more indispensable needs, there naturally arises the desire to provide for secondary and higher needs. Organized society, as Aristotle put it, comes into existence to make life possible and continues and develops in order to make life good.

In any considerable centre of population it is plain that there must be coöperation in providing for the supply of those primary needs previously so easily satisfied, if felt at all, in the open freedom of the country. Chief of these are pure water, drainage and sanitation, suitable highways for constant traffic, equipment for the prevention of fires and for the general police protection of life and property. While these primary needs are in process of being met, various secondary needs emerge, such as the need for schools, libraries, parks, the regulation of buildings, and other measures to improve, on the one hand, the atmosphere of civic life and, on the other, its intellectual and artistic quality. In a modern community, making any claim to be ranked as civilized, its individual members cannot be left to make voluntary provision for the supply of these very essential needs, such provision must be placed at the service of every member of the community, whether he may or may not be able to make a proportionate contribution towards the necessary outlay. Thus the taxes which are levied to sustain the various civic departments cannot be regarded as payment for services rendered, on any basis of economic exchange, but as a necessary contribution towards a public charge which must be met as a civic duty. At the same time

the levying of a civic tax should not be open to the charge of injustice or unfairness from the point of view of individuals having similar obligations and similar capacities to meet them.

On the other hand, well ascertained public opinion on the grounds of economic service may support the policy of providing citizens with a street car, or telephone service, or the supply of light, heat, or power, in such forms as electricity or gas. These services, however, cannot be supplied on the same basis as police, or fire protection, or general sanitation. However convenient or even essential when once established, such services must be supported by those who directly benefit by them, on the same principles of exchange as would apply to their provision by private individuals or corporations. The very different grounds on which contributions are made by the citizens to the support of a fire department and an electric light department indicate the essential distinction between municipal taxation and ordinary exchange payments for services rendered. An individual citizen may be given the option of walking to his place of business or riding in a civic tram, but cannot be given the option of leaving his house unprotected against fire while his neighbor is so protected. If, then, some citizens are unable to meet their full share of the cost of fire protection, other citizens must contribute more than their proportion of this cost. The question therefore arises, on what basis should compulsory taxes be levied, as contrasted with the voluntary exchange payments for civic services?

Without arguing the matter in detail, it may be fairly claimed that the only practical basis of regular civic taxation is the basis of ability to pay; and ability to pay necessarily rests upon the average net income enjoyed by the individual citizens, whether singly or in corporations. But, while ability to pay is dependent upon income as a permanent condition of tax paying, it is often very difficult to determine net income, especially where capital is employed, not in a fixed form, but largely as fluid or exchange capital; while the difference between the outgoing and incoming stream is the only indication of net income.

In all normal forms of taxation, whether based upon ability to pay or not, few practical distinctions can be made as between incomes acquired as the result of exceptional personal quality or close attention to business, and incomes derived from forms of investment which call for little exertion on the part of the owner of the capital.

An attempt to follow up this distinction to some extent and to make the relative value contributions of the individual and of the community determining factors in the levying of taxes, is manifested in the arguments for the so-called single tax on land values. It is not possible within our space to pass in review the curious medley of half-truths and more largely proportioned misconceptions in the sphere of economics, directed to the philanthropic object of a universal redemption of mankind, morally, socially and politically, but argued with a most misanthropic fervor against all who question the validity and claims of the system set forth. The fundamental principle maintained is that the local community as a whole contributes to land its entire economic value, while other economic values are derived from human labor and enterprise. This, however, is contrary to obvious facts, it being evident that while no values can exist without reference to the needs of a community, to determine what proportion of human effort or enterprise must cooperate with these needs to furnish articles or services of different values is a very complex and variable problem, and it is as variable in the case of land as in the case of many other articles. Moreover, the community which contributes to the value of land, especially its speculative or exceptional value, is a community some of whose most influential elements reside far from the municipality or even the state or province which would exclusively benefit by a tax levied upon land values alone.

Again, the claim put forward that the single tax would, on the one hand, be a check on land speculation, and, on the other, bring into the civic treasury a considerable share of the speculator's gains, is plainly contrary to the facts. It is just the successful speculator who suffers least of all from any annual tax upon land. The really successful speculator, as evidenced in the remarkable history of land speculation in many western Canadian towns and cities during the past few years, holds his land for so short a period, and makes such phenomenal gains on his sales, that no annual tax on land can do more than take the merest fragment of his profits. On the other hand, when he is through with his land speculation, having accumulated fabulous wealth within a very brief period, he naturally places it in other and safer forms of permanent investment. There, under the single tax system, it would be safe from the tax collector to whose perennial visits the speculator leaves his latest victims, to have their

economic life crushed between the millstones of collapsing land values and rising tax rates.

But while the single land tax conspicuously fails to reach the pocket of the successful land speculator, there is no one whose gains may be more legitimately laid under heavy tribute for civic needs. As a matter of fact the real prices of land before and after a land boom plainly indicate that much the larger proportion of what the shrewd land speculator has dealt in, under the guise of land sales, are simply carefully dressed visions of sudden wealth to be obtained by the transfer of city lots. The lots themselves may have little permanent interest for either party to the speculation. Those, however, who have a permanent use for them can obtain them only at the speculative rates which they bear as counters in the game of land speculation.

One of the most disheartening features in the long period of stagnation and slow recovery, which follows the collapse of a land boom in an over-grown and over-built city, is the legacy of debt and heavy interest charges which is entailed upon the unfortunate citizens. Indeed, during the boom period, a great many expenses which should have been met from the annual taxes are paid out of the proceeds of loans. After the boom, however, not only have these charges to be met out of annual taxes, but also the full interest on the millions borrowed, as well as many repairs and minor replacements rendered necessary by imperfect work under inadequate supervision. Thus, after the boom, the annual taxation may be considerably greater than during the period of flush times and special expenditure. The interest charges alone in many of the best boomed cities in Canada amount to from one-fourth to one-third of the annual taxes. If provision is being made for a sinking fund, the proportion is of course considerably increased.

Now it is commonly found that these great burdens have to be borne in the largest measure, especially if any form of single tax is in operation, not by the successful speculators, who have disposed of the greater part of their land holdings, but by their unfortunate victims, many of whom are forced to purchase their lands for residence or other permanent uses and to pay for them the boom prices, which could not be subsequently recovered.

Obviously, what is required is some system of civic taxation which will be as rapid and effective in operation and as generous in

its levies upon exceptional profits as are the operations and the gains of the successful land speculator. Clearly also this will not be the slow biennial system of taxation, which assesses the property one year and collects the taxes the following year. During this time, in cases of the really typical civic boom, such as we have had in numerous towns and cities in both the United States and Canada, the property may have changed hands scores of times; often, in single transfers, at an increase in value anywhere from 25 to 100 per cent, or more. Nor can effective taxation of the speculator have reference to any rental value of the properties dealt in, rental value being practically non-existent during a civic boom. It must be a system which provides for an automatic tax levy at every legal transfer of the property, and which collects the taxes from the purchaser as part of the price which he has agreed to pay for the land. Moreover, the levy must increase in percentage as the scale of profit increases, thus strictly following the central principle of taxing according to ability to pay.

Such a system of taxation, however, and the application of the proceeds thereof, must be entirely distinct from the system of annual taxation required to meet the current needs of the municipalities. The situation involves a sharp distinction between two forms of civic expenditure. First, we have the expenditure which provides for the regular annual needs of the citizens under normal conditions of civic life. Secondly, we have the capital expenditure, quite irregular as to the periods of the outlay, but which is called for in furnishing a city, frequently all at one time, with a well equipped plant or series of plants to meet the modern needs of the citizens. This is distinct from the annual expenditure in maintaining and operating the plants, and which falls within the scope of annual revenue and expenditure. Thus the provision of an adequate civic water supply, the construction of a well planned system of drainage and sewage disposal, the grading and paving of streets, the provisions for squares and parks, the necessary equipment for fire protection, the erection of public buildings, such as civic buildings, schools, etc., represent a very great outlay which is quite independent of the annual expenditure in maintaining and operating these civic institutions. At present this capital outlay is provided in the shape of huge municipal loans, the subsequent interest on which absorbs from one-fourth to one-third of the annual taxes in many Canadian towns and cities.

In a slowly growing city these expenditures extend over a very considerable period and if a sinking fund is provided for, it may be possible to secure the extinction of one loan on capital account before another requires to be effected. This, however, is a very rare experience among modern cities on this continent. Many towns and cities have suddenly grown up under the stimulus of a speculative fever and have been forced to incur enormous debts within a very brief period, and their capital outlays take place when prices and wages are at high water mark. This means that the capital expenditure is coincident with and commonly due to the very land booms which furnish such enormous gains for the successful land speculators.

A study of the various stages in the growth of a city boom reveals the interesting fact that once the future city is launched on an active period of expansion, (a movement commonly arranged by a group of shrewd and courageous speculators who manage to attract considerable capital from outside sources), the influx of population which is attracted soon creates more work for itself than for its employers. In other words, it requires more workmen in the building and allied trades to build houses to accommodate the workmen themselves than are required to erect buildings for their employers. Further, the incoming army of workmen provides customers for a large body of merchants and middlemen and their employees and dependents, who in turn must all be provided with houses and places of business, again augmenting the numbers to be employed in the building trades. Another class of citizens must provide material and implements for building, and for the equipment and furnishing of these buildings. So the circle continues to widen through agencies of every kind, including bankers, lawyers, doctors, clergymen, teachers, with all the buildings and equipment which they require to carry on their businesses and professions.

At the head of this procession, the original apostles of faith in indefinite expansion, stimulating every form of civic expenditure and of private and corporate investment, are the shrewd and courageous land speculators, reaping phenomenal harvests of profit, and, as becomes men of far-sighted instincts, not envious of the lesser prophets who follow in their wake, imitating their methods and frequently furnishing them with customers.

As experience indicates, a rapid expansion in civic debt goes hand in hand with a rapid expansion in city building and the growth

of population, while an active land speculation accompanies and stimulates both. Now all that is required to transfer a large proportion of these speculative gains from the rapidly expanding bank account of a successful land speculator to the coffers of the city treasury, is to provide, somewhat after the plan adopted in Britain, the necessary legal authority and comparatively simple administrative machinery. Provision ought to be made that the value of each piece of land shall be assessed, as early in its economic career as possible, at its actual market value. Thereafter at the period of each legal sale of the land, when the buyer pays more than its registered value or its value at the last transfer, a certain percentage of the increased value shall be first paid into the civic treasury, and the remainder to the seller as may be agreed upon. The percentage to be thus taken by the municipality shall be graded according to an appointed scale, increasing with an increase in the rate of profit and shortness of time since the previous sale. The price at which each sale takes place shall be registered with the title of the land and will thus be made known to the subsequent purchasers when looking up the title. The registered price at the last transfer would be the basis of information to the purchaser as to what proportion of the price which he has agreed to pay, he must transfer to the city, and what proportion shall be paid to the seller of the land. Take a hypothetical case:—A purchaser, who found that the price which he had agreed to pay for a piece of land was 25 per cent more than the seller had paid for it within a year past, might be required to pay one-third of the increase to the civic treasury and the remainder to its seller. If, however, the profit received were 50 per cent, then he might be required to pay 40 per cent of this profit to the city, and so on according to a graded scale, until, if the profit were 200 or 300 per cent, he might be required to transfer 70 or 80 per cent of it to the civic treasury. If, however, the sale took place not within the year but two or three years after the last sale, the rate should be diminished according to another scale, taking into account interest charges, annual taxation, improvements on the land, etc., which would tend to diminish with time the profits of the sale. Again, if no sale should take place within a given period of five, or possibly ten years, the property should be re-valued and a percentage of the increased value taken on the same basis as to the rate of increase and duration of time as if a sale had taken place at the close of the period. Under this system, while the

aggregate gain to the speculator would still amount to a very attractive profit on his investments, the share coming to the municipality would automatically keep pace with the rise in price, and the rapidity, volume and profit of the land sales.

As already indicated, this form of taxation is intended, on the one hand, to provide for special capital expenditures and not for annual revenues; and, on the other, to secure a reasonable share of the special profits from exceptional increases in land values, especially during short periods. One of its chief virtues, from the point of view of ability to pay, is that it taxes high profits only while these profits are being obtained, and especially while they are being rapidly obtained. When, however, speculation ceases and values remain stationary or decline, this special tax automatically ceases also. It takes nothing from any purchaser who makes no profit on his sales or on his holdings. It is, however, during such periods of stagnation, when the various municipalities are not expanding, that their capital expenditure is certain to be correspondingly light. At the same time the annual needs will be met by the annual taxes on real estate and incomes, above a certain rate, from other sources of invested wealth or personal service.

Certain minor details would, of course, require to be considered in bringing such a scheme of taxation into general operation; but the simple and direct basis of the tax, the important purpose which it would serve, partly in checking extravagant speculation, and partly in furnishing an indispensable capital fund for civic equipment just at the time and in proportion to the need for capital outlay, ought to commend it to the practical consideration of state and provincial governments in both Canada and the United States.

SINGLE TAX

BY W. S. U'REN,

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The single tax is a proposal to exempt all vocations, all land improvements and personal property from taxation for revenue, and to collect all taxes for public revenue from the assessed value or the yearly ground rental value of land. The word "land" is used in its broad sense as meaning the earth. The single-taxers expect that the people will finally take all the yearly ground rental values of land for public purposes.

The system has proved very popular as far as it has been tried, and the more fully it is tried the more popular it becomes. In nearly all of the American states there are constitutional provisions that prevent state or local application of the single tax, though the officers can apply it in very large measure if they wish to do so, so far as exemptions are concerned. Mr. J. J. Pastoriza, assessor of Houston, Texas, assesses land at about 75 per cent of its market value, and improvements and personal property at so small a percentage that it amounts practically to an exemption. No one has interfered effectively yet, chiefly because he has assured the land owners and speculators that if they try to make trouble for him he will enforce the law rigorously in the assessment of personal property of every kind, as well as improvements.

Mr. Reed, the assessor in Multnomah County, Oregon, which includes Portland, assesses land at 75 per cent of its market value; buildings in towns at about 50 per cent of their present value, allowing liberally for depreciation; personal property, notes, accounts, bank stocks, etc., he assesses at 50 per cent or less, and the business men think it is fine; he assesses uncultivated land and land in actual cultivation, of equal fertility and location, at the same rate per acre that he assesses farms, and the farmers think that is fine. Mortgages he does not assess. The board of equalization backs him in this. But every effort to make a law requiring all assessors in Oregon to show as good judgment as Mr. Reed does is bitterly fought on the ground that it is "single tax," "confiscation," "Henry Georgeism," and everything else that is bad.

The purpose of the single tax is much more than a mere fiscal reform in the method of raising public revenues. When fully applied, it will abolish land speculation and involuntary unemployment. Full application of the single tax will give to land users all the profit and product of their labor in using the land, and will necessarily make it impossible for any person to gain a profit by merely owning land without himself using it. This will not reduce or interfere with the rent or income an owner may get for the use of land improvements.

Every exemption from taxes of any class or portion of personal property, or of land improvements, is a step towards the single tax. Every increase of tax on land values that is not equally applied to personal property and land improvements is a step towards the single tax.

The Canadian province of Alberta has probably advanced further towards the single tax than any other government. The latest reports are that no taxes are levied or collected on business, on land improvements, or on personal property, except some small taxes in the city of Edmondton. In addition to this exemption, the province has now provided for levying a sur-tax of 10 mills on the dollar on the assessed value of uncultivated land. This amounts to about $6\frac{1}{4}$ cents per acre, and the province expects to get \$1,500,000 annually from this source. So many of the land speculators in the city of Edmondton are said to be discouraged that more than \$1,000,000 of their taxes are delinquent and unpaid. The necessary result will be that this land will be sold for taxes to people who will use it. If so much as \$1,000,000 of speculators' taxes are unpaid, it is an indication that some parts of Alberta have raised the single tax high enough to seriously discourage land speculation and speculators. They certainly have greatly encouraged land improvements, and are bringing many new settlers to Alberta. This is true in a less degree of British Columbia and Saskatchewan, because they have not so fully applied the single tax to land values.

In California and Oregon a certain class of municipalities called irrigation districts may levy all their local district taxes on the value of land, exempting improvements and personal property.

Montevideo, in Uruguay, has also taken a long step towards the single tax by levying on land values a special tax of 10 mills that does not apply to personal property and improvements.

Pittsburgh, Pennsylvania, is probably further advanced towards the practical application of single tax for local purposes than any other city in the United States, because the last legislature allowed that city to gradually exempt buildings from taxes, and the further fact that manufacturing machinery has been exempt from taxes in that state for many years.

In the three Pacific coast states there is constant agitation for the single tax, or measures leading to it. In 1912 California rejected a municipal home rule tax measure by a large majority. A better measure was submitted by the next legislature, which was rejected at the recent election, but by a much smaller majority. All the opposition was on the ground that home rule would lead to single tax.

In Washington there has been no state-wide vote, but the cities of Seattle and Everett have each voted twice on municipal exemption proposals. At the last election in Everett the measure was adopted, but the officers refused to enforce it.

Pueblo, Colorado, voted for a city exemption measure last spring, but the officers refused to apply the law.

In 1912 Missouri rejected a single tax measure by an overwhelming majority. In 1914 the anti-single-taxers submitted a measure to make single tax impossible in Missouri, and this was rejected by a very large majority.

The issue has been before the people of Oregon four times. The first was in 1908, on a measure to exempt household furniture, manufacturing machinery and some other labor values in actual use. This measure was rejected by a vote of about two to one in a total vote of 90,000 on the measure. In 1910, backed by the Fels Fund Commission, the single-taxers submitted an amendment for county home rule in taxation, which was adopted by about 2,000 majority, in a total vote of less than 90,000 on the measure. In 1912, again financed by the Fels Fund Commission, a graduated single tax measure was offered and rejected by a vote of eight to three, in a total vote of 112,000 on the question. The county home rule amendment, adopted in 1910, was repealed in 1912. At the same time the people approved a bill exempting all household furniture and jewelry in actual use. In this campaign the opposition spent a large amount of money, probably in the neighborhood of \$100,000, directly and indirectly. The single-taxers spent about \$40,000, contributed

by the Fels Fund. In 1914 some of the single-taxers submitted a measure by initiative petition exempting every person from taxes on \$1,500 of the total assessed value of his dwelling house, live-stock and other land improvements and labor values. It did not exempt corporations. This measure was rejected by a vote of two to one in a total vote of 202,000 voting on the measure. The total cost of the campaign for this measure was about \$800. The opposition spent at least twenty times that much. One of its leagues filed a report showing expenses of nearly \$9,000.

In these four campaigns the whole opposition to the measures was on the ground that they were single tax, or the opening wedges for single tax. This line of approach to single tax was adopted because of its success in New Zealand and the western provinces of Canada in obtaining partial or complete exemption of labor values from taxation. But in those countries, it seems to have been accepted on its merits chiefly as a fiscal reform. In Missouri and our coast states its opponents said it would lead to confiscation of the farmers' lands. They made no distinction between land and land values, and convinced a large majority of the farmers that they would lose their farms if any measure tending towards single tax should be adopted.

The single tax is a simple and certain method of collecting taxes fairly. The land cannot be hidden, and its value is either well known by every citizen of the neighborhood, or can very easily be learned. There is no inquisition into the private affairs of citizens, and no temptation to false swearing or tax dodging.

But the strongest reasons for the single tax are moral rather than fiscal. Ground rent is the surest and safest method yet invented by which one person gets the product of another's labor and gives nothing in return. This is a moral wrong. The community creates the ground rent values, and if the man who uses the land pays the ground rent to the public treasury as a tax, he will be paying the party who creates the value. That would save the producer or land user from the double tax, one to support the ground owner for being permitted to use the land, and the other on everything he owns and uses, which is to support the government.

The revival of single tax agitation in the United States dates from the organization of the Fels Fund Commission in 1908. The late Joseph Fels financed it chiefly, putting in about \$2 for every

one that was paid by all other advocates. This fund made possible the active campaigns on the Pacific coast, and helped greatly in Missouri. The land agitation in England, the British Colonies and other foreign countries is largely due to his enthusiasm and financial aid. Mrs. Fels is continuing the work so well begun by her husband.

The adoption of the single tax is very greatly retarded because history shows that taxation heretofore has always been a burden, and often the chief instrument of oppression. Added to this is the opinion held by nearly all Americans, who are not themselves tax dodgers, that exemption of any property from taxes is a sort of legalized tax dodging, not much less than criminal. The two opinions taken together make it very difficult to get a fair hearing for the theory that economic freedom can be had by taxing one kind of values exclusively, and that it is entirely just to completely exempt all other values from contributing to the public expenses. No greater service to the single tax and the cause of economic freedom and the abolition of poverty could be rendered by anyone, than the offering of a measure which would avoid these two objections, and would appeal, instantly and of itself, to the sense of justice and to the land and home hunger of every normal man and woman.

Villa has accomplished this in Mexico with his war-cry of "The land for the Peons," and it is fine. They flock to his banner and fight and die for the cause. But Villa does not have to reckon with the American constitutions and courts. For the same reason, the general progress of the movement has been very much more rapid in England and the British Colonies than in the United States. The law-making power of the British people is not ham-strung by a written constitution. When the Parliament makes a law, the courts have no power to declare it null and void. Therefore, the British cry of "The land for the people" creates an enthusiasm which cannot be aroused for a mere fiscal matter like the single tax proposals Americans are obliged to offer.

Our single tax progress on the west coast is really much greater than our one-third vote seems to indicate. At least one-half of the remaining two-thirds of the voters can think of the single tax now without shying. They are opposed to it, but most of them will now listen to a single-taxer without thinking of him as a traitor to American institutions. I believe when the next campaign is made in Oregon, it will be for the straight out single tax measure,

not only proposing raising of public revenues from a tax on land in proportion to its value, but ultimately to tax all the yearly ground rental values into the public treasuries. But of course all personal property and land improvements will be exempted by such a measure.

There may be two more campaigns on that line without gaining much on the present percentage of the total vote, but we shall be gaining ground, nevertheless. Sometime from the third campaign to the fifth, that is, between six and ten years, our single tax measure will go with a rush, just as the prohibition and equal suffrage measures were adopted. There will be no backward step after that, and it will not be long before the people will find public use for all the yearly ground rent values in Oregon.

The thought is in the air, and it is a matter of only a few years, until somewhere in the United States the single tax is put fully in operation. It makes little difference where that is done, because commercial competition will then force its very speedy adoption by all other sections of the country. The commercial competition of Alberta and the western Canadian provinces is helping to spread the idea in the coast states. Within ten years the general property tax will be ancient history on the Pacific coast.

BOOK DEPARTMENT

NOTES

BABASAHEB, NARAYANRAO (Chief of Ichalkaranji). *Impressions of British Life and Character*. Pp. xxiii, 243. Price, \$2.25. New York: The Macmillan Company, 1914.

BABSON, ROGER W. *The Future of Nations*. Pp. 123. Price, \$1. Wellesley Hills: Babson's Statistical Organization, 1914.

BARRINGTON, MRS. RUSSELL. *The Life of Walter Bagehot*. Pp. viii, 478. Price, \$4. New York: Longmans, Green and Company, 1914.

A biography both authoritative and interesting. The Hutton memoirs were not complete. Omissions were necessitated because Walter Bagehot's father was living when the memoirs were written. The present biography, written by a sister-in-law, is apparently exhaustive. The tone is eulogistic, but this merely confirms the verdict of friends that as a man Walter Bagehot was greater even than his books.

BIGELOW, JOHN. *American Policy*. Pp. vi, 184. Price, \$1. New York: Charles Scribner's Sons, 1914.

These somewhat unrelated chapters present no definite line of argument. They deal with the population conditions of America and with phases of the Monroe Doctrine. America is shown to be underpopulated, peopled by a variety of races among which the white predominates, the Anglo-Saxon branch dominating. South America, it is asserted, wants immigration but realizes that to populate is to govern and hence is unwilling to see Anglo-Saxons come in large numbers into its borders. After reviewing the Monroe Doctrine and its perversions the author considers how the Americas can be drawn together in spite of the mutual suspicion which now keeps them apart. He concludes that a non-aggressive assertion of the Monroe Doctrine such as its framers intended is essential and that to counteract the possibility of European attack upon that policy American states should cultivate the close friendship of Russia, Japan, and China apparently as a means by which a new world balance of power may be brought into being.

BRERETON, CLOUDESLEY. *Who is Responsible? Armageddon and After!* Pp. ix, 104. Price, 50 cents. New York: G. P. Putnam's Sons, 1914.

BUCK, SOLON JUSTUS. *Travel and Description 1765-1865*. Pp. xi, 514. Springfield, Illinois: State Historical Library, 1914.

This volume contains three extensive bibliographies of works referring to the history of the state of Illinois; one dealing with travel and description

1765-1865, one with county histories, atlases and biographical collections, and one with territorial and state laws. The bibliography of travel and description is of great value not only to students of Illinois history but to students of the history of the United States in general. The works are listed in chronological order, each one briefly annotated and certain libraries indicated where they may be found. By the use of the copious and well prepared index one can locate references by author or by topic.

BULLARD, ARTHUR. *Panama*. (Revised Edition.) Pp. xiv, 601. Price, \$2. New York: The Macmillan Company, 1914.

This is not Panama of today or of any other day. It is a popular account of the setting in history not only of the state of Panama and of the canal but of the western Caribbean in general. The author presents a running narrative of early settlement, international rivalries, the history of canal construction and present day social and political conditions.

Statistics are conspicuous by their fewness and no attempt is made to distribute space with regard for the relative importance of the subjects discussed. Some of the chapters bear upon the present conditions in the Canal region not at all or only in the most general way.

In spite of these limitations the average reader who wishes an untechnical discussion which will give him an understanding of isthmian history, problems and conditions will find this volume both entertaining and readable.

Catholic Encyclopedia Index, The. Pp. ix, 959. Price, \$6. New York: The Encyclopedia Press, Inc., 1914.

The usefulness of the Catholic Encyclopedia has been greatly enhanced by the publication of this large volume of indexes containing the subjects of all articles treated in the body of the work together with references to all leading sub-divisions of subjects occurring in the various articles, references to these topics in other articles and subjects on which there are no special articles. An elaborate system of cross-references adds further value to the index. Many of these references run into several columns of fine print and are a striking evidence of the wealth of material to be found in the fifteen volumes of the Encyclopedia. At the same time, the index emphasizes the absence of a systematic treatment in the body of the work of certain topics on which the historical reader would gladly be informed, as, for example, Papal Revenues, Pluralities, etc., though it would be unfair to expect, in an undertaking of such magnitude, that the special curiosity of each inquirer should be wholly satisfied. At the close of the volume various courses of reading have been outlined under such headings as apologetics, education, history of the church, law, etc., with references to the appropriate sections of the Encyclopedia.

CHESSER, ELIZABETH SLOAN. *Woman, Marriage and Motherhood*. Pp. xv, 287. Price, \$1.50. New York: Funk and Wagnalls Company, 1913.

A frank discussion by a woman of the woman question, that, as the author says, lays "stress upon the importance of efficient, protected motherhood."

To obtain this end, important reforms are advocated affecting marriage laws and woman's legal position, the unmarried mother, divorce, the sweated mother, the factory mother, women prisoners, etc.; but it is recognized at the same time that social betterment is a gradual process. The vote is not a remedy, says Dr. Chesser, neither is the endowment of motherhood nor the removal of the artificial barriers restricting woman's entrance into professional life. "But everything which tends to raise the status of women—above all to secure the adequate protection of woman as mother, is in the best interests of the community." Throughout the book there is reflected the feeling that the reforms advocated are due to a conviction deepened by actual experience with women and women's problems.

COLEMAN, CHRISTOPHER BUSH. *Constantine the Great and Christianity*. Pp. 257. Price, \$2. New York: Longmans, Green & Company, 1914.

DAVIES, EMIL. *The Collectivist State in the Making*. Pp. xviii, 267. Price, \$1.60. New York: The Macmillan Company, 1914.

Mr. Davies has given us not only an inspiring book on public ownership but has listed a vast number of activities that in one part of the world or another are at present subjects of public control. A large number of states and cities are owners and even speculators in land. There are public monopolies in many forms of transportation and in raw materials. It is interesting to learn that there are municipal bakeries, restaurants and ice plants. We are accustomed to the discussion of public docks and markets but it is seldom that we hear of a publicly owned cold storage plant operating a line of refrigerator cars.

The author attempts to determine the limits of such public activity but finds that this is impossible. There is continued opposition to the increase of public activity but the movement continues to spread. He feels that the movement will continue and that as opportunity and needs develop, public ownership will grow. As the state or city require additional revenues, as the people demand relief from special forms of exploitation, as there is discontent of employees, as socialistic ideas develop, new lines of endeavor will be opened up.

Although we may not be willing to agree with many of the author's forecasts, it is very interesting to learn that such a variety of human needs are at present supplied by public endeavor.

DICK, W. J. *Conservation of Coal in Canada*. Pp. xii, 212. Toronto: Commission of Conservation, 1914.

This is a report of the Commission of Conservation of Canada. The first part discusses and summarizes the problems of coal conservation, such as the use of low grade coals in gas producers, briquettes, coking by use of by-product ovens, etc. The second, and much the larger part, of the report is a description of the mines and mining methods in Canada. Colored maps showing the source of coal for railroads and domestic uses in Canada accompany the report, together with several diagrams and illustrations.

EMERICK, CHARLES F. *The Struggle for Equality in the United States*. Reprinted from *Popular Science Monthly*, Vol. lxxxiii, No. 6, December, 1913; Vol. lxxxiv, Nos. 1-6, January to June, 1914; Vol. lxxxv, No. 1, July, 1914. Pp. 99. Price, 50 cents. New York: *Popular Science Monthly*, 1914.

FARRINGTON, FREDERIC ERNEST. *Commercial Education in Germany*. Pp. ix, 258. Price, \$1.10. New York: The Macmillan Company, 1914.

Germany's educational system emphasizes thoroughness and specialization. It tolerates none of the interference on the part of the individual with which we are so familiar in America. It aims at specific ends and measurably attains those ends. This usually leads to status and fixity rather than to mobility of individual destiny. In the vocational field technical skill is at least one definite result of the educational process. Professor Farrington's book outlines in an introductory way the most prominent features of Germany's system as an introduction to the much more extended description of educational arrangements in the commercial field. Beginning with the lower commercial schools, he passes on to a telling discussion of both secondary commercial schools and the colleges of commerce.

In conclusion, he emphasizes the necessity for coöperation of all interests in the working out of plans for commercial education, for a large additional element of compulsion in American methods, for a variety of curriculum to meet local needs, and for continuation schools during day-time hours.

FISKE, AMOS KIDDER. *Honest Business*. Pp. vii, 333. Price, \$1.25. New York: G. P. Putnam's Sons, 1914.

The author sums his argument up on page 325 by writing: "The conclusion of the whole matter is that honesty, square dealing, good faith, is best as a business policy. It is not merely a moral virtue, good for the soul or necessary to salvation, and sustained by the sanctions of religion or social custom. It is not simply an ethical principle, essential to sound character and good repute in personal relations, and necessary to the cohesion of well-ordered society. It is a pervasive economic principle, the basis of confidence, which is the foundation of prosperity and material success." The matter is tersely and aptly put. No more carefully worked argument could be found in favor of the business expediency of honest dealing.

FOUNTAIN, PAUL. *The River Amazon from Its Sources to the Sea*. Pp. xi, 321. Price, \$2.50. New York: Dodd, Mead and Company, 1914.

A very disappointing account of the Amazon, based upon travels taken thirty years ago in South America. The book gives very little that is new and fails to bring together in usable form the known information. It is, therefore, of little help to the student of South America. There are many observations on animal life, disconnected descriptions of the various rivers of the Amazon system, and the records of personal experiences of travel. The treatment is "gossipy," the material is unorganized, and the topics discussed are often of no special importance.

GUEST, GEORGE. *A Social History of England*. Pp. xi, 209. Price, 40 cents. New York: The Macmillan Company, 1914.

An elementary reader describing in outline the social and industrial life of the people of England from the time of Caesar's invasion to the present. Dividing the time into six periods, the author gives the characteristic features of the economic and social life of the nation in each period, describes and points out the causes of the great changes which occurred in the social structure, and traces the development of modern English institutions. The book is full of valuable information and it shows throughout an intimate acquaintance of the author with the best modern thought on the subject with which he deals.

HANEY, LEWIS H. *Business Organization and Combination*. Pp. xv, 523. Price, \$2. New York: The Macmillan Company, 1914.

Professor Haney has enlarged his excellent text by the addition of two chapters, one giving an account of the organization of the International Harvester Company, and the other dealing with the Sherman act and its interpretation by the courts. The Harvester Company's organization affords a good illustration of many of the practices and principles connected with the corporate organization of business. The chapter on the anti-trust act presents a concise account of the important cases in which the law has been applied by the federal courts. The author falls into error in one place, however, (p. 422), when he states that in the Debs case the Sherman law was applied by the supreme court of the United States (158 U. S. 564) "to a combination of wage earners in restraint of trade." The court expressly declined to consider the case with reference to the anti-trust act, saying, however, that it was not to be understood as dissenting from the opinion of the lower court with reference to the scope of that law.

HAYNES, JOHN. *Economics in the Secondary School*. Pp. xii, 93. Price, 60 cents. Boston: Houghton, Mifflin Company, 1914.

This is an interesting little monograph advocating the teaching of economics in the final year of the secondary school course, and giving definite specifications for such a course. The chapter titles are strictly indicative of the content of the monograph. These titles are: the need of economic knowledge; the suitability of economics as a secondary school subject; the present status of economics in the secondary school; the place of economics in the curriculum and its relation to other subjects; methods of teaching economics; the content of the course in economics; bibliographies.

HOWE, C. D. and WHITE, J. N. *Trent Watershed Survey*. Pp. 156, with pocket map. Toronto: Commission of Conservation, 1913.

This report is a detailed study of a small region, and is of very great value because of its bearings upon the general problem of conservation. It is only by such thorough studies of selected localities that solutions to many problems of water and forest conservation can be found. The region covered by

the report is along the line of the Trent Canal, "a section of a once rich forest area in Old Ontario," now rapidly approaching a desert because of mismanagement under the old system of lumbering. The first part of the report gives a summary of the conditions and recommendations for improving them. The second part describes in detail the physiographic and forest conditions of the region and the third part discusses the economic, industrial and social conditions. The report is a regional geography of the Trent Watershed, with special reference to conservation of resources.

JAY, JUNIUS. *Open-Air Politics*. Pp. 235. Price, \$1.25. Boston: Houghton, Mifflin Company, 1914.

The writer, who is described as "eminent in public life" and "of more than national fame," has put together in conversational form a series of estimates concerning the most pressing economic and social problems now confronting the United States. Although the material is neither profound nor particularly significant, the author has succeeded in making a readable book.

JENNINGS, AL and IRWIN, WILL. *Beating Back*. Pp. 355. Price, \$1.50. New York: D. Appleton and Company, 1914.

Viewed as a thrilling story of outlawry, a description of prison conditions, the struggle of an ex-convict to accomplish his rehabilitation or as a psychological self-analysis, this narrative of Al Jennings, the notorious Oklahoma bandit, as told by Will Irwin, is of absorbing interest. In the first chapter, Mr. Irwin describes the conditions which plunged the young Virginian into one of the most desperate careers of crime. The remainder of the book is the personal story of Al Jennings told in the presence of a stenographer and edited by Mr. Irwin. Perhaps the recital of the criminal career might have been abbreviated, but it gives the setting to prison life. The detailed story of experiences in the Ohio state penitentiary and the Leavenworth prison is one more evidence of the utter inadequacy of the prison system now rapidly being abandoned. The revelations here set forth can only hasten its passing. Public sentiment, when properly enlightened, will no longer tolerate the atrocious treatment of prisoners. The story shows that the ex-convict can come back, but the path is a difficult one, for society has no confidence in the prison as a cure and the victim must still bear the burden of this distrust. That criminals do reform under the present system is one further evidence that they are not the hopeless class they are often assumed to be. The book will stimulate the public desire, even if it does not point the way, for a saner treatment of the criminal.

JOHNSON, JOSEPH FRENCH. *Money and Currency*. (Rev. Ed.) Pp. x, 423. Price, \$1.75. Boston: Ginn and Company, 1914.

In this revision Professor Johnson has added a chapter on the reform of the currency system of the United States and has inserted in the appendix a comparison of the Aldrich plan and the federal reserve act. Also several statistical tables have been added.

JONES, LOUIS T. *The Quakers of Iowa*. Pp. 360. Price, \$2.50. Iowa City: Iowa State Historical Society, 1914.

This book adds another volume to the rapidly growing list of works on Quaker history, and is a valuable contribution to the social history of the great west.

The author dates the beginnings of Iowa Quakerism from the long pilgrimage in 1835 of Isaac Pidgeon and family who migrated from South Carolina and established their home near the present Salem, Iowa. Then followed a rapid increase of the Quaker population in Iowa which resulted in the establishment of Iowa yearly meeting in 1863. About the same time the great "Revival Movement" began to make itself felt and the attendant innovations led to a separation in 1877 at which time the more conservative Friends parted company with those of the progressive "evangelistic" type.

Due space is allotted to the benevolent and educational efforts of Friends in Iowa and to the present status of Quakerism in that state.

Apparently the author has used the chief printed materials such as *Yearly Meeting Minutes*, *Disciplines*, and various data published in Friends' periodicals, as well as the manuscript minutes of some monthly and quarterly meetings in Iowa. There is no bibliography. The authorities are cited in the notes which are unfortunately grouped at the end of the volume. There is a good index.

JOSEPH, SAMUEL. *Jewish Immigration to the United States from 1881 to 1910*. Pp. 209. Price, \$1.50. New York: Longmans, Green and Company, 1914.

Students of immigration will welcome this volume because of its dispassionate discussion of the political and economic background of Jewish immigration. The author has made no effort whatever to justify or condemn. He has sought merely to explain the movement. In part I we have a picture of the economic, political and social conditions in Russia, Roumania and Austria-Hungary which have resulted in the emigration movement. Part II describes the movement to the United States and shows clearly the fluctuations in the tide as affected directly by the severity of anti-Semitic feeling and legislation in the various countries. Economic conditions in the United States have affected Jewish immigration less than other groups. The latter part of the book is devoted to special characteristics of Jewish immigration such as the family movement, permanent settlement, occupations, illiteracy and destination. Thirty-five pages of statistical tables and three of bibliography add to its value. The absence of an index is a serious omission. The book is written from the point of view of the serious student of the problem, rather than of the alarmist, and ought to give sanity to the discussion.

KEY, ELLEN. *The Younger Generation*. Pp. v, 270. Price, \$1.50. New York: G. P. Putnam's Sons, 1914.

Under the general topic *The Younger Generation*, the author has discussed youth, coöperation and culture, the peace problem, militarism, and similar

problems. Although the essays are written in the author's usual happy style, the work is merely another illustration of that unfortunate idea that whenever an author has written a sufficient number of miscellaneous articles to make up three hundred printed pages, he is justified in publishing them under one cover and calling them a book.

KOBAYASHI, TERUAKI. *La Société Japonaise* (translated by M. Junkichi Yoshida). Pp. xx, 223. Price, 5 francs. Paris: Librairie Felix Alcan, 1914.

MAGEE, H. W. Supplement to Magee on Banks and Banking. *The Federal Reserve Act*. Pp. 116. Price, \$1. Albany: Matthew Bender and Company, 1914.

This supplement contains the federal reserve act with numerous explanatory notes, followed by such official documents as had been issued at the time of publication. Doubtless additions will be made from time to time in order to keep it constantly up to date.

PAGE, EDWARD D. *Trade Morals: Their Origin, Growth and Province*. Pp. xv, 287. Price, \$1.50. New Haven: Yale University Press, 1914.

This work was probably not written as a parody of Sumner's *Folkways*, Giddings' *Principles of Sociology*, and Westermarck's *Origin and Development of the Moral Ideas*, compressed into a very few hundred pages, as one would suspect it to be on first reading. After all, a member of the Hughes committee of 1909, as the author was, could hardly be expected to display subtle and fantastic humor. This book merely shows the dreadful effects of engaging in the dry goods commission business for forty years, before reading Spencer, Darwin, Hobhouse and Hadley. Few men have done all this—no one, so far as we know, has ever before recorded the ensuing mental ferment.

The author's general conclusion is that morals are governed by custom and evolutionary processes—something many others have believed. "Commercial honor is largely a matter of moonshine," wrote R. S. Surtees in *Ask Mama*; that "trade morals" are more substantial than they were pronounced by the sporting writer of the mid-nineteenth century, the work under consideration does not indicate.

PARKER, GEORGE H. *Biology and Social Problems*. Pp. xix, 130. Price, \$1.10. New York: Houghton, Mifflin Company, 1914.

The author of this most instructive little work is professor of zoölogy at Harvard, and the contents were originally given as a series of lectures at Amherst. There are four chapters. The first explains the nervous system and its working; the second describes the way in which the body is under the control of various substances known as hormones which are produced largely by the ductless glands; the third carefully explains the process of reproduction, and the last surveys the field of evolution. The style is excellent; the facts are clearly stated. The book is to be recommended to any who may seek a reliable and succinct statement of present thought on these subjects.

REELY, MARY KATHARINE. *Selected Articles on World Peace*. Pp. xxv, 199. Price, \$1. White Plains, N. Y.: H. W. Wilson Company, 1914.

ROBBINS, EDWIN CLYDE. *Railway Conductors: A Study in Organized Labor*. Pp. 183. Price, \$1.50. New York: Longmans, Green and Company, 1914.

A scholarly discussion, covering history, government, trade regulations and beneficiary features of this railway brotherhood.

SELIGMAN, EDWIN R. A. *Principles of Economics*. (Sixth Edition). Pp. liv, 711. Price, \$2.50. New York: Longmans, Green and Company, 1914.

Few works on economics have been kept abreast of current changes as has this treatise by Professor Seligman. In this sixth edition chapters have been added on the control of trusts, labor legislation and labor insurance. The chapters on money and credit have been condensed, but not to the exclusion of a discussion of the federal reserve act. Throughout, there is the same wholesome regard for facts, the same avoidance of doctrinaire attitudes, that has characterized previous editions.

SLADEN, DOUGLAS. *The Real Truth about Germany*. Pp. xiii, 272. Price, \$1. New York: G. P. Putnam's Sons, 1914.

The monograph *Truth about Germany* has had a wide circulation in the United States. Published under the supervision of a group of representative Germans, including many high in the nobility and the service of the government, it has an authoritative tone which lends to its cogent arguments force greater than that of most current writing on the war. Mr. Sladen's book is a detailed reply to the German exposition. The original pamphlet is republished and after each paragraph is inserted in black faced type Mr. Sladen's reply from the English point of view. The book presents, therefore, a debate between a German and English writer—in which there is, however, no opportunity for rebuttal by the German. The arrangement makes the book hard to read. The constant shifting of the argument from one side to the other destroys the sequence of the thought of both disputants. The world knows so little about the real situation preceding the war that one often feels that the discussion sinks to the level of unsupported charge and countercharge. Neither writer convinces but each portrays well the current point of view in his country.

SLOANE, WILLIAM MILLIGAN. *Party Government in the United States of America*. Pp. xvii, 451. Price, \$2. New York: Harper and Brothers, 1914.

This volume grew out of the series of lectures given by the author during 1912 and 1913 as the Roosevelt professor at the universities of Berlin and Munich. It presents a general survey of our party history and party problems. It brings some of the well-known general discussions, such as Ford's *Rise and Growth of American Politics*, down to date, and discusses current party problems in an inclusive way. It is of value as a general work but makes no specific contributions.

TRIMBLE, WILLIAM J. *The Mining Advance into the Inland Empire*. Pp. 254. Price, 40 cents. Madison: University of Wisconsin, 1914.

The inland empire about which Dr. Trimble writes is that part of North America usually called the interior Pacific-northwest, and includes British Columbia as well as Idaho and Montana. The author tells the story of the settling of this vast region by miners, and paints the picture of the social life in the camps and towns. He then points out the beneficial effect on agriculture and stock-raising of the market afforded by the mining communities. The main purpose of the book, however, is to show that although the inland empire possessed physiographic, industrial and (at first) ethnic unity, the drawing of an international boundary across the domain has produced widely divergent political tendencies which are recurrent and persistent. For instance, the mining laws of British Columbia were copied from Australia and New Zealand whereas those of Idaho and Montana imitated California and Nevada. Also the different attitude toward Negroes and Chinese on the two sides of the line has had a marked effect on the societies of the two places.

For the most part the book is a straightforward compilation and narration of historical facts. It has very little economic or sociological interpretation of the material collected.

URLIN, ETHEL L. *A Short History of Marriage*. Pp. xi, 269. Price, \$1.25. Philadelphia: David McKay, 1914.

It is difficult to understand why the author of this volume, after stating in the opening lines of the preface that "In giving this brief summary of the marriage customs of some of the principal nations of the world, my endeavor has been to select those which are in any special degree curious and interesting, and to compile a volume which, while useful for reference, aims primarily at attracting and amusing the general reader," should publish it under the title of *A Short History of Marriage*. If this is the author's concept of what constitutes a history of marriage the concept should be revised. As a narrative or description of "Marriage Rites, Customs and Folklore in Many Countries and All Ages," a secondary title, it is a valuable piece of work. It brings into small space and usable form a wealth of information not only "attractive and amusing" but highly illuminating and instructive in reference to many present survivals in marriage customs and ceremonies.

VAN KLEECK, MARY. *Working Girls in Evening Schools*. Pp. xi, 252. Price, \$1.50. New York: Survey Associates, Inc., 1914.

The author has already prepared a series of valuable studies on the various phases of woman's work. This last partakes of the general character of the preceding studies. It is illuminating and telling, though not profound. Thirteen thousand girls and women who were in regular attendance upon evening classes were asked to answer a series of questions regarding working conditions, personal ambitions, and the like. These answers were supplemented by a restricted investigation of a number of cases. The book concludes with a strong recommendation in favor of vocational training and vocational guidance for girls.

WEAVER, E. W. *Vocations for Girls*. Pp. 200. Price, 75 cents. New York: The A. S. Barnes Company, 1913.

Prepared by a committee of teachers under the direction of E. W. Weaver, *Vocations for Girls* covers most completely the field indicated. Beginning with the field of work, preparation and making the choice, the book presents an exhaustive list of possible occupations for young girls. At the end of each chapter is a list of references on the particular topic discussed, and practical questions to be answered.

The general tone of the book is rather patronizing than otherwise, and as such might prove to be rather irritating than helpful to a young woman of independence; but this is perhaps the natural attitude of teacher to pupil.

WHITE, HORACE. *Money and Banking*. (5th Ed., Revised and Enlarged.) Pp. xiv, 541. Price, \$1.50. Boston: Ginn and Company, 1914.

Mr. White has supplemented his treatment in the earlier editions of this standard work by inserting a chapter on the federal reserve system and adding appendices in which are given the federal reserve act and the communication sent to the federal reserve board by the New York Clearing House Association, dealing with the sort of commercial paper that should be eligible for rediscount. The new chapter on the federal reserve system summarizes the law and discusses briefly the steps that have thus far been taken in the establishment of the system.

WHITRIDGE, FREDERICK W. *One American's Opinion of the European War*. Pp. xi, 79. Price, 50 cents. New York: E. P. Dutton and Company, 1914.

WOODBURN, JAMES A. *Political Parties and Party Problems in the United States*. (Second revised and enlarged edition). Pp. xiii, 487. Price, \$2.50. New York: G. P. Putnam's Sons, 1914.

All students of American party problems and party history are familiar with Professor Woodburn's *Political Parties and Party Problems in the United States*, first published in 1903. The second edition, revised and enlarged, contains all of the valuable and suggestive material in the former volume and brings certain of the statistics down to date throughout the volume—for instance, in the chapter on minor parties—and adds a number of chapters on current political problems, such as the problems of party finance, primary election reform, the initiative, referendum and recall.

To say that the added chapters and the revised portions of the book, few though the revised portions be, are up to the standard of the first edition of this volume is to say that the work as a whole is a concise, orderly, interesting presentation of the general field of party history, party organization and party problems, and of the relation that the usages and methods of political parties bear to our social, national and economic welfare.

ZEBALLOS, E. S. *La Nationalité au point de vue de la Législation Comparée et du Droit Privé Humain*. Pp. 557. Price, 25 fr. Paris: Recueil Sirey, 1914.

REVIEWS

BIZZELL, WILLIAM BENNETT. *Judicial Interpretation of Political Theory*. Pp. v, 273. Price, \$1.50. New York: G. P. Putnam's Sons, 1914.

Party conviction has always been "recognized as an essential qualification for the supreme bench in addition to legal learning and public service." In substantiation of this general observation, the author, in his introduction, points out that "only ardent supporters of a strong federal system were elevated to the bench by Washington and Adams." Unanimity in the early opinions herein finds its explanation. The only apparent exception to the conclusion that party conviction was an essential qualification to a position on the supreme bench the author finds to be in the offer of the chief justiceship to Patrick Henry by President Washington in the fall of 1795-96, despite the fact that Henry had been the ablest and most influential opponent of constitutional ratification in Virginia.

The volume reviews the partisan character of many leading cases, including such typical instances as *Hepburn v. Griswold*, a reversal by the supreme court for which political influence has been held responsible, and the "decisions in the insular cases and the decisions growing out of the Inter-State Commerce Act" which have "carried loose construction to its ultimate limit."

Criticisms of the supreme court have been made from the time of the earlier cases on the power of the courts to declare congressional acts unconstitutional, through the *Dred Scott* case, the prize cases, the legal tender cases, the income tax decisions, to the criticism of the Democratic platform of 1904 in which the Republican party is held responsible for forcing "strained, unnatural constructions upon the statutes by virtue of its control of the judiciary."

The respective chapters include intimate and thorough-going discussions of the judicial power over legislative enactments: theory of constitutional construction; nature of the federal Union; imperialism *v.* expansion; the theory of internal improvements; the theory of the United States bank; the theory of legal tender; the theory of a protective tariff; the theory of an income tax; the theory of direct legislation; and the theory of the recall of judicial decisions. Of these important and far-reaching problems of our national life, the constitutionality of internal improvements and the constitutionality of the recall of judicial decisions only have not been officially determined by the supreme court of the United States.

The volume contains few new facts but it does contain an interesting array of facts, cogently put and interestingly related. "The courts have been able to settle the metes and bounds of practically every [party] issue considered, with the exception of that of slavery." The author extols the "supreme confidence" that the American people have imposed in their federal courts, and finds that "it is fortunate that this confidence exists for it insures the country against riots and civil strife, resulting from heated debate and party antagonism."

The volume is valuable because it brings together the legal and constitutional phases of the most prominent planks in partisan platforms, and

indicates through its every page the close relation between the federal judicial tribunals and the solution of political, social and economic problems.

CLYDE L. KING.

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BÜLOW, PRINCE BERNHARD VON. *Imperial Germany.* (Trans. by Marie A. Lewenz). Pp. 342. Price, \$3. New York: Dodd, Mead and Company, 1914.

In this book the ex-chancellor of the empire has given a notable interpretation from a strictly personal point of view of the recent political life of Germany. About one-third of the book is devoted to "foreign policy" and the remainder to "home policy." After a brief survey of the political progress which culminated in the empire, the author proceeds to analyze the various steps which led to Germany's taking a prominent part in international politics—the acquisition of colonies, the alliances and the building of the navy. He divulges the "secret" that only by the most energetic efforts was the government able to wrest from the people consent to accept the burdens involved in the frequent increases of army and navy. In an extended discussion of the relations between Germany and England, he points out that the conflict of interests is bound to be sharp, but never irreconcilable (he writes in 1913), provided Germany asserts herself firmly but keeps calm and cool and neither injures England nor runs after her. In the clear and frank discussion of other factors in the new foreign policy of Germany von Bülow shows that when he was the principal actor he understood to a high degree the realities of the situation. One is tempted to believe that had he continued in office until now the history of 1914 would have been quite different. The one unpleasant note is the ever recurring insistence of the duty of Germany to assert herself whenever her honor is threatened, even from a long distance. This nervous touchiness looks very much like a reflection of the apprehensiveness of a new country that is still uncertain of itself and is oversensitive about its own manners as well as about those of its neighbors.

The conservative bias of the author dominates the discussion of the home policy. Like all German conservatives he believes that the German people are fundamentally incompetent in political affairs and must be governed by authority. In support of this thesis he presents an interesting analysis of the German character, its love of doctrinaire theory, its particularistic tendencies, and its excessive interest in criticizing and fault-finding. Party spirit and party loyalty outweigh even love of country and make the Reichstag a very disagreeable body to do business with. An American wonders that he can complain of this spirit of criticism in view of the fact that in the German system the Reichstag is forbidden to do anything but criticize. As the cardinal principle of von Bülow's political doctrine is that Germany must be governed by authority, it follows that the present one-sided distribution of power between the Bundesrat and the people must not be changed, and that therefore the fight for strong imperial armaments, for a really imperial finance system and against social democracy must be kept up until success is attained.

The book was written for Germans as part of a larger work by various authors. It is to some extent apologetic and polemical. But the treatment is broad and tolerant, as is to be expected of von Bülow, and the book is a distinctly important source for those who are trying to understand the Germany of today. The translation is on the whole excellent—an occasional Germanism has crept in but not often. The use of Lord Lieutenant as equivalent of Oberpräsident is, however, impossible.

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Bowdoin College.

DAVIS, HORACE, A. *The Judicial Veto*. Pp. vi, 148. Price, \$1. Boston: Houghton, Mifflin Company, 1914.

The power of the courts to pass on the constitutionality of laws occupies a prominent place in present-day academic discussions. Mr. Davis' volume is a contribution to the already extensive literature on this subject. Two-thirds of the book are devoted to a review of the opinions concerning judicial power held by the makers of the federal constitution and the members of the contemporary ratifying conventions. These arguments have already appeared as an article in the *American Political Science Review*. In the main they go over the same ground covered by Professor Beard in his *The Supreme Court and the Constitution*. The author by use of substantially the same material arrives at the exactly opposite conclusion. There are weaknesses in his arguments but he succeeds in pointing out several important ones in the arguments of those who maintain that the constitution was intended to establish a system of judicial control.

Much more interesting and of greater practical value are the two short introductory chapters in which Mr. Davis essays a constructive program. Admitting that judicial control, whatever its origin, is now firmly established, the author seeks a scheme the effect of which would be "not to review judicial action or to amend the constitution, but prevent the courts from amending it." He finds that our present method of testing the constitutionality of a statute is faulty because it depends on private individuals to bring suit to test the validity of laws, and because a law declared void is held to have been without force from the beginning.

Such a condition produces a feeling of irresponsibility among law makers because "their work, if imperfect, is wholly undone." The courts are in a false position because they "decide on insufficient data and prejudiced argument." The public grows to hold law in light esteem, and concludes that every man may be his own judge as to whether a law is to be obeyed—at least until the court has passed upon it.

The remedy the author suggests involves changing our constitutions so that a law declared unconstitutional should be so only from the time of decision. Aggrieved parties are to be given recompense by the state for such damage as they may have suffered during the period when the act was in operation. Secondly he would have the trial of constitutionality conducted at the instance of the state rather than on the initiative of private individuals.

The aggrieved person merely calls to the attention of the attorney general the damage being done by the law and asks for a review of its constitutionality. At the trial members of the legislature which passed the law and any other persons may present the reasons for the legislation. If the court then decides that the law is in whole or part void its operation is to cease for the future to the extent that is determined by the court.

The author admits there are faults in the logic of his scheme but believes that it would furnish a common sense standard. Many questions will arise in the minds of his readers as to how the plan would actually work in practice, but there can be little doubt that the sort of thinking Mr. Davis attempts is too much neglected. Disputes over the origin of an alleged unfortunate system of judicial control are entertaining for dialecticians but they are far less profitable than studies which aim to determine whether the bad results alleged, actually exist and if they do exist attempt to find the way out.

CHESTER LLOYD JONES.

University of Wisconsin.

DEARLE, N. B. *Industrial Training*. Pp. xiii, 596. Price, 10/6. London: P. S. King and Son, 1914.

The book is an analysis of the conditions of industrial training in London. Mr. Dearle classifies the methods of entering a trade in London under four heads, namely:

1. Regular service, which takes four forms: (a) Formal apprenticeship by indenture; (b) Informal *vs.* Verbal agreement, which is not legally binding; (c) Employment during good behavior; (d) Working and learning.

2. Learning by migration, which applies to workmen having already attained partial proficiency in their trades and takes the following forms: (a) The workman, who has served his apprenticeship, but is still not fully proficient; (b) Apprentices, who through the business retirement of their employers are compelled to enter new apprenticeships, in advanced standing, as "turn overs," the change in apprenticeship being arranged by the employer; (c) The apprentice who has served a pre-arranged short apprenticeship. The "short service apprenticeship" is coming into constantly increasing favor in London. (d) The country trained apprentice whose opportunities for learning usually have been narrow. Having had "a more thorough all-round training than that which is often obtainable in London," the country-trained apprentice "must spend a few years as an improver in the finishing school of London industry," where he "has still to master the finer work, the greater speed of working and the special conditions of machine production, which are frequently characteristic of it." "Often, though by no means always, he makes in the end the best workman." (e) The exploited apprentice; (f) The shiftless, ever-changing workman, whom Dearle calls "the casual fringe;" (g) The "migratory improver proper," who "takes advantage of such opportunities as occur, and advances himself by his own efforts from an unskilled boy laborer to the position of a mechanic."

3. Learning by "following up" a master who goes from one job to another.

"The plumber and his mate, the smith and his hammerman, look for jobs together." The boy "is not there to learn." His business is to assist the man to do his own work. But in so doing, "if he has any capacity at all, he will eventually find" an opportunity "to get a start for himself as an improver (apprentice)." "The vital fact is this, that the youth is there to assist the man. By so doing he finds himself in a position to learn later on, but not till then does he actually do so."

4. "Picking up" a semi-skilled job. Of this there are four classes: (a) Specialized processes, which involve considerable skill within a very narrow range. Such specialization is accompanied by the use of a great deal of machinery; (b) Simple work in the trades, not requiring an expert mechanic, such as carmen, warehousemen, etc.; (c) Jobs requiring small skill, but a high degree of responsibility and care, as crane-drivers, etc., (d) Mates and assistants to other workmen.

Mr. Dearle's treatment of his subject is much amplified by numerous illustrations taken from his actual contact with the industry and workmen concerned. In the remaining 400 pages of his 552 page book, he discusses the values of the different methods of learning described, the conditions of engagement and employment, the trade and technical schools of London, social problems, and future needs and their satisfaction.

The value of the book is informative, and to students of industrial education in America is, at least, suggestive of methods of organizing their research.

JOHN C. FRAZEE.

Philadelphia.

ESCHER, FRANKLIN. *Practical Investing*. Pp. 177. Price, \$2.00. New York: Bankers Publishing Company, 1914.

Every discussion of the principles and practices governing the art of practical investing, even though it adds nothing to the sum of financial knowledge, may be welcomed; for the last word on the subject will never be written and the last person who can derive interest and profit from the discussion will never be born. Mr. Escher's book contains no startling theories and no infallible formulas. He does not, as so many investment experts do, try to persuade the reader that there is somewhere in "Financial Utopia" an ideal investment. He rather discourages the idea of ever being able to discover an ideal, saying frankly that "different securities suit different requirements—what for one man would be an ideal investment, might be totally unsuited for another," and that "determining one's investment requirements is not a matter of finance at all, but of plain, everyday common sense."

Starting with a description of the different kinds of securities and their main attributes, he discusses successively the main investment principles—of the desirability of diversifying an investment and of the relative importance of such qualities as marketability, price stability and chance of appreciation. Finally he gives a good general idea of the factors influencing the rise and fall of security prices—of the relations existing between the prices of securities and the money-market and trade conditions.

Two chapters of special interest are "The True Nature of Bonds Convertible into Stock" and "Europe's Influence on the American Market." In spite of the necessary condensation, to cover so vast a field in a moderate sized volume, the book is most serviceable and has the lasting virtue of dealing with a technical subject in a readable manner.

EARLE H. RAUDNITZ.

New York City.

FRANK, TENNEY. *Roman Imperialism*. Pp. xiii, 365. Price, \$2.50. New York: The Macmillan Company, 1914.

This book is a timely, scholarly and interesting summary and interpretation of "the precise influences that urged the Roman republic toward territorial expansion." In estimating the motives of conduct of nations as of individuals, the historian cannot be altogether uninfluenced by personal opinion. Professor Frank believes that the expansion of Rome was "groping, stumbling, accidental," caused by specific accidents that led the nation unwittingly from one contest to another, "until, to her own surprise, Rome was mistress of the Mediterranean world." This thesis, maintained with great learning and clarity, is indeed suggestive: yet can anyone of our day and generation tell what ideas and ideals were in the minds of Roman statesmen, in the background of their thoughts? Certain facts, too often neglected, Professor Frank brings forward forcibly. He shows that, at least in her early history, Rome was often reluctant to make war; that she took by conquest far less territory than is generally supposed (only 3 per cent of land conquered in Italy between 338 and 264 B.C.); that apparently neither Rome nor Carthage before the Second Punic War had the idea of universal power nor was bent upon conquest at all costs; that Rome sometimes showed a real sympathy for the national rights of other countries as in the withdrawal from Greece in 196 B.C. by that impractical yet thoroughly Roman sentimentalist, Flaminius; that she at other times too "hailed down the flag;" that more than once she was a liberal ally rather than a tyrannical mistress; and that from the domination of Latium until the "Roman peace" of Augustus, she displayed remarkable sympathetic insight into the psychology of other nations. Professor Frank's book should be of help in forming a fairer judgment on Rome's national policy. So stout a classicist as the late Goldwin Smith is somewhere quoted as believing that the study of Latin authors in the English schools nurtured an arrogantly imperialistic spirit. There is, however, something to be said for the nobler manifestations of Roman power. It is made clear by Professor Frank that the early practice of the Romans, the *mos maiorum* was "based on the naïve assumption that tribes and states, being collections of individuals, must conduct themselves with justice and good faith, even as individuals;" and that the right of aggression and desire for more territory were not just causes of war. Many years later, Augustus boasted that he had observed the ancient fetial rules and had brought war unjustly on no nation. Is modern imperialism so much more conscientious?

KENNETH C. M. SILLS.

Bowdoin College.

GODDARD, H. H. *Feeble-Mindedness. Its Causes and Consequences.* Pp. xii, 559. Price \$5. New York: The Macmillan Company, 1914.

Under the far-sighted leadership of its superintendent, Edward R. Johnstone, the Training School for Feeble-Minded Girls and Boys at Vineland, N. J., has become widely known as a place where the children are studied as well as cared for. This research work has been conducted by the author and his assistants. The 327 cases described in this volume are those studied. They represent, we are told, all ages and grades. So far as possible the homes have been visited and all the available facts concerning them and their background secured.

In the first chapter on social problems Dr. Goddard shows the growing evidence that much of the problems of poverty, crime, prostitution, etc., are due to mental defects. Then he tells how the investigations were conducted and considers the reliability of the data secured in the second chapter. It is interesting to note that the reinvestigations required in some cases usually resulted in the discovery of additional cases of feeble-mindedness.

In chapters III and IV (pages 47 to 465) a brief description of each case is given. The material is grouped in accordance with the probable cause of the defect. In 164 families the defect was "*certainly* hereditary." In 34 others this is so probable that the section is called "*probably* hereditary." Thirty-seven families showed decidedly neuropathic conditions without direct evidence of heredity. In 57 families accident or disease seems to have been the cause. In 8 cases the record was so good that no cause could be discovered while so little could be learned of 27 families that they are not counted in the percentages. These two chapters are of the utmost value. Family charts are presented, the children's portraits are reproduced, and one not familiar with such cases gets much information concerning them.

In chapter V the author studies the causes and concludes that heredity is by all means the most important. Only 4.6 per cent of the cases can be attributed to accidents before birth, if the "Mongolians" a most puzzling class coming largely from normal families be excepted. These form 3.6 per cent of the total and apparently are cases of arrested development. Ten and six-tenths per cent are assigned to causes acting after birth and half of these are attributed to meningitis. The data offer "practically no evidence of the spontaneous origin of hereditary feeble-mindedness." Much attention is paid to the possible influence of alcohol. The conclusion reached is that "alcoholism itself is only a symptom." Nor can any relation be established between such diseases as tuberculosis and syphilis and feeble-mindedness.

In chapters VI and VII the author considers the possibility of feeble-mindedness and normal-mindedness being unit characters and presenting the phenomena known to students of biology as "Mendelian." Dr. Goddard reaches the conclusion in spite of a confessed prejudice to the contrary that "normal-mindedness is, or at least behaves like, a unit character." As evidence, he shows that of 324 matings with a total of 1,752 children "the expectation would be feeble-minded, 704, the actual is 708; normal, expectation 352, actual 346."

Eugenics is briefly discussed in ten pages with rather negative conclusions. Dr. Goddard believes in colonization and is far from hostile to the suggestion of sterilization, but feels that either or both will fail to solve the question. Apparently his studies have shown him so many feeble-minded in the community that he simply gives up any idea of solution at present. This is made clearer in the last chapter "Practical Applications." They must be cared for, reproduction surely must be discouraged, better training must be given and our knowledge increased. With what result? The one suggested is that we "may find use for these people of moderate intelligence—who are able and willing to do much of the drudgery of the world, which other people will not do." Just what effect this attitude would have upon ideals of democracy or religion the author does not discuss.

In spite of this curious final attitude the author has given us, whether medical experts or laymen, one of the most important volumes yet written on the subject.

CARL KELSEY.

University of Pennsylvania.

GORDON, ERNEST. *The Anti-Alcohol Movement in Europe.* Pp. 333. Price, \$1.50. New York: Fleming H. Revell Company, 1913.

This book can hardly be called a scientific work; it is rather in the publisher's words "a weapon for the conflict in America." It is an arsenal of "facts" selected without critical judgment. The chief value of such a book is a fairly accurate picture of the prohibition movement in Europe; and it gains in interest by virtue of the recent Russian ukase against alcohol, a similar proclamation in Polish Prussia by the Kaiser, and Secretary Daniels' taboo on alcohol in our own Navy. The book has one supreme purpose: national prohibition. The result is apparent in the author's absolute inability to see anything grey: all is either black or white. Hence the tendency to indulge in opprobrious terms; for instance he speaks of "the pro-alcohol pedants on the Committee of Fifty;" Duclaux is called "fanatical;" August Palm is treated to condescending and gratuitous insult. American social workers, *The Survey*, and college graduates in general are insulted because of their indifference to the alcohol question.

From the standpoint of facts the book cannot pass unchallenged. For illustration no one can dogmatize with absolute assurance about the medical value of alcohol. No author can dismiss expert opinion as to the digestive value of alcohol quite so cavalierly and still claim scientific fairmindedness. And no citation of cranial statistics is worth much as an evidence of degeneration. Neither are we prepared to believe that alcoholism is wholly responsible for valuable lands lying fallow in Normandy. Nor that tree planting along roadways is impossible in the Lierre district of Belgium because drunkards habitually break them down! Moreover the evidence that alcohol and not lead or phosphorus is responsible for so-called lead or phosphorus poisoning is anything but convincing. Again, the pages of horrible examples cited to prove the "devastation which beer-drinking works" in Bremen are

choice illustrations of the fallacy involved in citing one of a complex of causes as the real cause or of failing to distinguish between a cause and a symptom. Misuse of statistics crops out in several places; notably, Eulenberg's figures showing that 1,152 Berlin school-suicides were the result of home troubles not of over-study are declared to mean "in most cases, alcohol." Another glaring instance of faulty correlation is the comparison of Paris figures for alcohol consumption and pawn-shop deposits.

The author trains his guns upon the unholy alliance between the Church and alcohol in England and on the Continent. He dismisses the Gothenburg System as a failure, and hints that its protagonists are perilously near impostors. Social reform is likewise summarily dismissed as offering no hope for alcohol-reform. And the reason is disclosed in the flat pronouncement that the "social order of the Western world rests largely on the sale of alcohol as on its chief support."

While the reviewer is no less interested in the elimination of the alcohol-pest than is the author, he is convinced that the desired end will be attained rather through the very social reform measures which the book repudiates than through such books themselves.

ARTHUR J. TODD.

University of Pittsburgh.

GULICK, SIDNEY L. *The American Japanese Problem.* Pp. x, 349. Price, \$1.75. New York: Charles Scribner's Sons, 1914.

With the general thesis of Mr. Gulick's discussion—that we should treat the Japanese immigration problem dispassionately—all will agree. He gives a thorough review of the arguments against allowing Orientals to come to this country on the same basis as Europeans and presents the answers of the more ardent friends of the Asiatics. In this portion of the book there is comparatively little new material, but the author's long familiarity with Japan and the Japanese prompts him to make many of his statements in stronger terms than those in which they are heard in the usual discussions in America.

There is no doubt in the author's mind that the Japanese would be a desirable addition to our population. Their industrious habits, artistic qualities, cleanliness and sobriety recommend them. That they are untrustworthy the author declares is not true. The conditions under which we have known them are deceptive, not the Japanese themselves. Their moral standards he admits are not the same as ours but their virtues are more than a balance for their vices. "Sexual laxity, petty lies, and even business deception are light faults compared with impolite, intemperate speech and uncontrolled wrath" (p. 51). It is to be doubted whether the average Anglo-Saxon would make this choice.

Mr. Gulick does not believe in unlimited immigration. He thinks the laws should be so framed that there would be no discrimination against races either in their terms or in their administration. He would have the number allowed to enter from each country limited to a certain per cent of those of that nationality already within the country—a principle already familiar through legislation proposed in Congress.

The question of the assimilability of the Orientals, it is argued, is not conclusive. Mental assimilation would occur, for the Japanese, it is insisted, take on the viewpoints and ambitions of those with whom they are associated. But this does not mean that members of the two races would necessarily form families. Racial assimilation should follow not precede this social assimilation and for the present mixed marriages are "highly undesirable." These conditions being granted, immigration should be allowed and provision made for naturalization.

Mr. Gulick's solution of the American-Japanese problem involves also active steps for the promotion of friendship between the two nations. A national commission is to determine the advisability of racial assimilation. "The results of their study should be embodied in national laws concerning" intermarriage, sterilization of individuals of undesirable heredity and the Americanizing of "already compacted unassimilated groups of aliens" (p. 294). The national government is to take complete charge of "all legal and legislative matters involving aliens" (p. 293), and a commission is to be given a certain percentage of the total national revenue for the promotion of better international understandings. These suggestions, of course, involve changes in our national constitution and policy beyond the range of practical action.

Mr. Gulick's suggestions for the solution of the American Japanese problem are less valuable than his exposition of its difficulties. These he has placed at the command of his readers in clear language and in terms easily understood by the non-technical reader.

CHESTER LLOYD JONES.

University of Wisconsin.

HALL, HUBERT. (Compiled by.) *A Select Bibliography for the Study, Sources and Literature of English Mediaeval Economic History*. Pp. xiii, 350. Price, 5s. London: P. S. King and Son, 1914.

This bibliography is the outgrowth of an investigation undertaken by Mr. Hall's seminar in history at the London School of Economics following a series of lectures delivered by him on the theory of historical bibliography. Like all works of this character, the question of inclusion and exclusion has been a puzzling one and the problem has been interpreted liberally in so far as Part I constitutes a brief bibliography not only of general mediaeval history but also of universal history and of the sciences auxiliary to history. So far as the continent is concerned this portion of the works adds nothing of interest either in arrangement or material to other well-known guides, but in its inventories of local records for the British Isles, it will prove a valuable help for the student.

The broad interpretation given by the compilers to the term economic history makes this guide of value to all students of mediaeval history as it includes references to works on political, constitutional, legal and ecclesiastical subjects and references to continental developments side by side with those in England, Scotland, Ireland and Wales. Its usefulness to the students

of economic history in particular, however, would have been enhanced if the compilers had avoided the temptation of all bibliographers to include all subjects of allied interest within the scope of their particular topic.

Following the usual practice, the bibliography includes both secondary works and original sources. For the most part descriptions of the items enumerated have been omitted, though valuable brief comments introduce the various sections and sub-divisions of the work. More than 3,000 titles are included in the book, divided into three parts. First, an introduction to the study of English Mediaeval economic history; including a list of the bibliographies of printed material, both secondary and primary for history in general and its auxiliary sciences, and the inventories of state and local archives and records. Second, the sources of mediaeval economic history; including a bibliography of the public and private records of England and her sister kingdoms, and a similar but briefer survey of the records of England's continental neighbors. Third, a list of modern works on special periods and special subjects in any way connected with mediaeval economic history, including the continent as well as England. An appendix follows on publications of learned societies and another on a select list of British and American periodical publications. The book closes with a full and valuable alphabetical index of all works cited.

A. C. HOWLAND.

University of Pennsylvania.

HIRST, F. W. *The Six Panics and Other Essays.* Pp. vii, 302. Price, 3s. 6d. London: Methuen and Company, Ltd., 1913.

The "six panics" were those which the author says have been created in England by and for the "members of the armament ring" to force from the English Parliament heavier expenditures for forts, armaments, dreadnoughts superdreadnoughts and air-ships. The panics described range from that of 1847-48, founded on a made-to-order French invasion, and finally stemmed only by stalwart efforts on the part of Cobden, on through the panics of 1851-53, 1859-61, 1882, the dreadnought panic of 1911, to the air-ship panic of 1913.

The pages are replete with facts as to how public sentiment is periodically aroused to the point of authorizing ever-increasing expenditures for war purposes. The enmities and fears of generations of Englishmen were fed by scores of unfounded reports such as that "Britain is at Germany's mercy now, and it is only the fear of the violation of all international etiquette which keeps her from taking advantage of her superiority." "Well authenticated" visions of German air-ships turned out, after the desired effect had been secured, to be "merely a farmer working at night in a field on the hilltop, taking manure about in a creaky wheelbarrow, with a light swung on the top of a broomstick attached to it." When all else failed, Mr. Balfour, or some other Englishman of like prominence, would aver that "the admiralty did not know the worst about Germany's secret preparations in its docks and shipyards." Says the author, "One of the most ingenious methods adopted

by the international armament firms, of which in April, 1913, Krupp has furnished the classical example, has been to spread false information as to what armament firms in other countries are doing or preparing to do."

In these ways armaments piled upon armaments and distrust accumulated upon distrust, and with each added reason for suspicion or distrust, the means of war were multiplied in all the nations concerned only to necessitate increasing armaments at home. Moreover, each added expenditure multiplied the number and power of those whose occupations and professions demanded increasing expenditures. Thus every added military expenditure is its own precursor for larger expenditures, easily augmented by the scare-monger, with his jingoistic rumors of wars. Thus in part have been created the suspicion and distrust that led inevitably to the present world-war.

CLYDE LYNDON KING.

University of Pennsylvania.

HOBSON, J. A. *Work and Wealth*. Pp. xvi, 367. Price, \$2. New York: The Macmillan Company, 1912.

Since the publication of *The Industrial System* and *The Evolution of Modern Capitalism*, American students of economics turn with keen anticipation to any contribution from the pen of Professor Hobson. In the case of the present book, those who have followed the author's previous work will be neither disappointed nor satisfied. The book promises well, opens admirably, and ends badly.

The author puts his thesis succinctly in this form (page 34): "We may state the problem provisionally in three questions; 1. What are the concrete goods and services which constitute the real national income? 2. How are these goods produced? 3. How are they consumed?" Upon the conclusions derived from an analysis of these three questions, the author bases his scheme for the rehabilitation of economic society.

The line of argument leads from a redefinition of costs and utility to a suggested scheme for the humanization of productive activities, which, according to the author, fall under the following heads: "Art, invention, professional services, organization and management, and labor-saving." The total of the productive activities the author conceives as "a process which rolls up costs into commodities" (page 34). That portion of the work which is concerned with the exposition of this contrast is clear, and though not so concise as one would like to see it, it is well-elaborated and effectively explained.

The emphasis on consumption is particularly commendable. "Ruskin," the author insists, "was a great forerunner in the humanization of economic philosophy. From a Pisgah height his mind's eye swept in quick, penetrative glances over the promised land, but he did not occupy it or furnish any clear survey." "Our purpose here is in part to perform the task indicated by Ruskin, viz., to apply to industry the vital standard of valuation, or, at any rate, to improve the instruments of vital survey" (pages 10 and 11). Thus far the science of economics has remained "distinctively mechanical and unfitted for the performance of any human interpretation of industry." "This is due to the failure of our psychological economists to tear themselves away

from the traditions of political economy, which in its very structure has made man subservient to marketable wealth" (page 7). The three defects which "disqualify current and economic science for the work of human valuation" are, first, "the exaggerated stress upon production;" second, "a standard of values which has no consistent relation to human welfare;" and third, "a mechanical conception of the economic system." The dictum of Ruskin is absolutely correct when he insists that "there is no wealth but life." Furthermore, "his insistence that all concrete wealth or money income must be estimated in relation to the vital cost of its production and the vital utility of its consumption, is the eventually accurate standpoint for a human valuation of industry" (page 9).

The most significant part of the present work involves the metrics which the author proposes to use for the measurement of human values in industry. The most unsatisfactory element in the work is the utter failure of these metrics to fulfill the purpose for which the author has created them. At the beginning of chapter four, for example, on "The Creative Factor in Production," the statement appears that "the most distinctively creative kind of human work is called art" (page 44). References to the "poet who does but sing because he must," to the "poor artist," and to the fact that artists are "more than compensated by the products of their work," represent the proximity of the author's mind to any accurate means of estimating values even in the realm where he insists the most creative element in production exists.

Entering the realm of the machine the author asserts,—“At present no doubt a very small proportion of the material which gets turned out by the industrial system contains any appreciable element of this individuality of workmanship” (page 76). Into his system, which the author described as metrical, he has thrown in this one sentence three elements of the most utter uncertainty. He speaks of “a very small proportion,” “any appreciable element,” and “individuality of workmanship” without supplying even a definition of these terms. Concluding this chapter on the machine, he says: “It is not easy to answer the two related questions—‘How far is machinery the master, how far the servant of the workers who cooperate with it!’ ‘How far does machinery aggravate, how far lighten the human costs of labor?’” (page 78)? These questions, which lie at the foundation of the author's task, he does not even attempt to answer. Again the author speaks of speeding up as “the most costly type of labor,” and raises questions regarding “a loss of liberty,” or “an encroachment upon personality” (page 86) by the industrial mechanism. Such terms are unmeasured, and for the present, at least, unmeasurable.

The reader turns from these chapters with a firm conviction that no metrics have yet been devised which will adequately span the human costs in production. The later chapters of the book, which aimed to apply the author's metrics to a reconstruction of the economic system, fall through the inadequacy of his metrics. The chapters are vague, hazy, and the points made indeterminate and unsatisfactory.

SCOTT NEARING.

University of Pennsylvania.

MALLET, BERNARD. *British Budgets. 1887-1888 to 1912-1913.* Pp. xxiv, 511. Price, \$3.25. New York: The Macmillan Company, 1914.

Mr. Mallet has been remarkably successful in this endeavor to supplement the earlier works of Lord Iddesleigh and Mr. Sydney Buxton. Taking up the problems of British financing at the point where Mr. Buxton's study ended (1885-1886) he presents and analyzes the budgets of Messrs. Goschen, Harcourt, Hicks-Beach, Ritchie, Chamberlain, Asquith and Lloyd George. This historical survey is followed by the budget tables for the period studied, and by a collection of tables summarizing governmental receipts and expenditures together with somewhat elaborate notes analyzing these tables.

As one reads this story of British financing and compares it with American practice he is struck with both the advantages and the futility of the budget system. The British practice gives definiteness and conciseness to fiscal matters. The careful forecast of both receipts and expenditures, their adjustment to each other and the close correspondence so often found between estimates and results, arouse admiration. Yet after all England's fiscal problems are much the same as those of the United States. The field of governmental activity is broadening, expenditures are increasing and new sources of revenue are being sought. There are to be seen the same outcry against the growth in annual disbursements and the same unwillingness to call a halt. Direct taxes are gradually being substituted for indirect. Income taxes and death duties are being increased to make possible large payments to local taxation accounts and for social insurance. Sinking fund payments may, in time of need, be drawn upon. In short, an excellent budget system, though invaluable, does not solve all fiscal problems.

There are several matters that probably could not have been treated and Mr. Mallet has wisely avoided them. His estimate of the policies of Mr. Goschen is admirably written but similar estimates of later chancellors cannot be presented for some years. Also a more complete discussion of the budgets of Mr. Lloyd George would have been appropriate had space permitted. Mr. Mallet very properly states that the topic could not be adequately treated within the limits of the present volume.

E. M. PATTERSON.

University of Pennsylvania.

MANGOLD, GEORGE B. *Problems of Child Welfare.* Pp. xv, 522. Price, \$2. New York: The Macmillan Company, 1914.

This book is practically a revision and enlargement of the author's previous book, entitled *Child Problems*, and "is designed especially for use by college and university students in courses on constructive and preventive philanthropy."

The social obligations to childhood are conceived to be: the conservation of life, care of health and physique, training and education, protection from child labor, reform and prevention of juvenile delinquency, and care of dependent children.

The book contains an immense amount of information, is well up-to-date in its brief discussion of an encyclopedic number of topics and sub-topics under the six general headings named above. Better discussions of special topics are available in print, but I know of no one book which covers so well the whole field of community care of children.

The most interesting chapters are the introduction and the conclusion, for in these the author departs most from the prevailing method of systematic statement of facts and accepted principles. For example, in the conclusion it is clearly pointed out that unless our programs for child welfare rest more solidly than at present on scientific bases of carefully and widely collected data, they will likely not prove welfare programs at all. Some topics on which he thinks we need more light are: origin of juvenile offenders, results of probation, the nature and causes of physical degeneracy, the real parts played by heredity and environment, the problem of sex education, and the economic basis of social reform.

The author emphatically deplores so-called social legislation for which there has been laid no adequate basis in fact. With this opinion the reviewer is in hearty accord. It is, therefore, something of a shock to read further on this pronouncement: "Of far greater importance than successful case work is the power to inspire and the capacity to develop community action for the promotion of the common good." Can the author make clear how such community action can actually be taken without basing it at every step upon the solid foundation of the facts of case work which he says are comparatively of little importance? For myself I think his earlier plea for more facts on which to base community programs is the sounder view.

Again (p. 491) he says: "The time has also come when we must relegate to the rear our older methods of individual work and begin to apply the new. Private charity is often narrow and individualistic and concerns itself only with binding up the wounds of the distressed." There is much truth in this statement, but is the alternative merely between that of keeping this work individualistic or throwing it away? Is not the third alternative the true one, as has been suggested above; namely, the continuance of case work with individuals but always with the individual in true perspective against the community background?

In short, must we not, whether under private or public auspices, continue to care for each individual as his real need demands, but while we are doing this, get also the maximum of suggestion for community action to prevent the conditions which lead to this kind of distress? Furthermore, shall we ever be free from the obligation to test in terms of individual welfare the results of community laws and programs already in force, or to be in force, designed to meet a particular kind of need?

The book has a varied bibliography and good working index. It should find a real field of usefulness especially as a text-book.

HENRY W. THURSTON.

New York School of Philanthropy.

MORGAN, GEORGE WILSON, AND PARKER, AMASA J. *Banking Law of New York*. Pp. vi, 547. Price, \$3.50. New York: The Bank Law Publishing Company, 1914.

As a result of the work of the commission to revise the banking law, appointed by Superintendent George C. Van Tuyl, Jr., the Van Tuyl-Hepburn banking commission has given the state of New York a thoroughly revised banking law. Many needed provisions to the old law have been added, such as bringing certain classes of private bankers under the supervision of the superintendent of banks, and at least a beginning has been made toward protecting small savings accounts received by individuals. The making of small loans by individuals at interest in excess of six per cent per annum has been brought under supervision, and provision has been made for the incorporation by savings and loan associations of a land bank, patterned after the German *landshaften*.

Messrs. Morgan and Parker have taken the text of the act and supplied in the footnotes, sources, cross-references, reasons for changes, case citations and judicial decisions, pertaining to various provisions of the act, until there is nothing left to be desired in the way of explanation and collateral information. Whenever advisable, references are made to the general corporation law of the state, and comparisons made with similar provisions in the federal reserve act.

In addition to the act which covers, in its various sections, the powers and duties of the superintendent, the state banks, private bankers, trust companies, savings banks, investment companies and brokers, savings and loan associations, the land bank, and credit unions, there is included the general statutes relating to banking corporations, the stock corporation law, the tax law and the penal law. Everything has been done to make the book thorough and convenient for ready reference. The general index, sixty-four pages in length, is noteworthy for its detail and convenience. The book is fully entitled to the popularity it enjoys with the banks and financial institutions in New York. It is far more than a convenience; it is a necessity.

EARLE H. RAUDNITZ.

New York City.

FIGOU, A. C. *Unemployment*. Pp. viii, 256. Price, 50 cents. New York: Henry Holt and Company, 1913.

The Home University Library adds by this study an interesting book on *Unemployment* to its list of "Social Service." The subject is analyzed from all sides and the following conclusions are drawn: in a theoretical, stationary state of society, if wages are artificially raised, a number of workers unable to earn the minimum will be an important cause of unemployment. In our society unemployment is largely caused by rigid wage scales that do not fluctuate with the demand for labor or with fluctuations in industry—seasonal, cyclical, etc.

To offset the existence of unemployment the author suggests various methods for making industry more stable. Among these are more enlighten-

ment on the part of bankers in making loans, the shortening of commercial credits and the development of adequate machinery for securing industrial peace. Among the more immediate remedies are the development of labor exchanges, bureaus of information, the development of public work in times of private depression and the elimination of the unskilled. These are the main remedies but they will not eliminate unemployment. Palliativessuch as arrangements for part time in periods of depression and insurance are also necessary.

The book is frankly popular and naturally adds but little to the scientific material that has been accumulated. It is unfortunate therefore that almost one-third of a volume written for the general reading public should be devoted to a serious and rather heavy economic discussion. This fact will without doubt seriously limit its audience.

ALEXANDER FLEISHER.

New York City.

ROSS, EDWARD ALSWORTH. *The Old World in the New.* Pp. 327. Price, \$2.40. New York: The Century Company, 1914.

After a brief description of the chief ethnic elements in our early American population, seven chapters are devoted to the description of the different nationalities and peoples that have been added since 1820. No volume extant contains so much descriptive material on our racial complexity. The specific groups studied are: The Celtic Irish, the Germans, the Scandinavians, the Italians, the Slavs, the East European Hebrews, and "the lesser immigrants groups." In the estimates of their respective values in our present racial amalgam the author indulges in sweeping generalizations with scant regard for individual values and differences within the groups. Perhaps this is inevitable in an effort to stress typical characters. In the chapters devoted to Economic Consequences of Immigration," "Social Effects of Immigration," "Immigrants in Politics" and "American Blood and Immigrant Blood," the writer allows himself even greater latitude in unqualified general statements in epigrammatic style. It may be due to the general attitude toward immigration rather than to specific statement that one is made to feel, after reading the book; that the tide is overwhelming, that the social problems are menacing, that immigration is the bane of American politics and that immigrant blood is bad blood. Certainly none of these are closed subjects. Our population in 1910 was but three-tenths of one per cent more foreign born than it was in 1870. The Immigration Commission of 1907 declared that immigrants had not reduced wages, and that the ratio of crime is not greater among aliens than among natives when like groups are compared. Immigrants get their political education from American politicians. Biologists will hardly admit the general assumption of race superiority and inferiority.

Everyone will enjoy the fearlessness with which Professor Ross declares his convictions reached after long and profound study of the problem. The book is cleverly written in the vigorous and often picturesque style characteristic of the author. It is deserving of a wide reading and of careful con-

sideration and especially on the part of those who have strong pro-immigration sympathies. Often it is by considering divergent points of view that the truth is most clearly perceived.

J. P. LICHTENBERGER.

University of Pennsylvania.

THOMPSON, CLARENCE BERTRAND. (Ed. by.) *Scientific Management*. Pp. vii, 878. Price, \$3. Cambridge: Harvard University Press, 1914.

Every once in a while the public gets hold of an academic catchword and goes mad over it. If the phrase represents a reform the public clamor does both good and harm. It calls forth a welter of writing some of which has a beneficial educative effect, but much of it is merely personal glorification tagged to a popular whim. Such has been the fate of the term scientific management. So much concerning it has been proclaimed by pen and tongue that a student seeking principles or a business man looking for guidance is at a loss to know which to select and what to cast aside as worthless. Mr. Clarence B. Thompson has endeavored to go through the great mass of material that has been printed since Mr. Taylor first enunciated his principles of management. In a book called *Scientific Management*, Mr. Thompson has made a judicious selection of articles written by the foremost apostles of the new movement and put them together in a form easy of reference. He has performed a real service to everyone who has an interest in teaching or practicing management. Not the least valuable is Mr. Thompson's own article on the bibliography of scientific management. Of course not everyone will agree with the author's selection of articles. Some that he has deemed worthy, others would omit, while some that he has included in his collection might have been left out. He has bestowed extravagant praise upon writers whom those most intimate with the movement consider gifted impostors, but in general his choice is excellent and Mr. Thompson's work is worthy of much commendation.

R. MALCOLM KEIR.

University of Pennsylvania.

WELLINGTON, RAYNOR G. *The Political and Sectional Influence of the Public Lands, 1828-1842*. Pp. 131. Price, \$1. Boston: Houghton, Mifflin Company, 1914.

One of the most interesting subjects of the early political history of the United States is the dominating influence exercised by the West on the course pursued by the federal government with regard to the great economic questions over which the three sections of the country clashed during the three decades following 1820. This study attempts to bring out the fact that the attitude of the West toward public lands was in a large measure the determining factor in the outcome of the sectional struggles. As the author states, "The struggles of the sections were centering about these three economic issues—tariff, public lands, and internal improvements. The interest of the different sections in these issues, in order of their importance, was as follows:

the Northwest—low-priced public lands, internal improvements, a high tariff; the Southwest—low-priced public lands, a low tariff, internal improvements; the seaboard South—a low tariff, no internal improvements at federal expense, high-priced public lands; the North Atlantic States—a high tariff, high-priced public lands, internal improvements." The entire situation was complicated by the ambition of the political leaders of the time, Clay, Calhoun, Jackson and Van Buren, each of whom was strongly identified with a particular sectional policy, but each of whom was willing to enter a compromise which would enable him to satisfy his personal aspirations.

Combining with the North Atlantic States the West brought about the enactment of a high tariff law, expecting that in return the manufacturing district would concede the chief desire of the West—low-priced public lands. The refusal of the North Atlantic States to make this concession drove the West into an alliance with the South. Both parties of this combination attained its chief interest, a low tariff and low-priced public lands, and in presidential campaigns after 1832 the real political leaders of the day were set aside for individuals who were less outspoken in their beliefs and more colorless in their policies.

The author states his problem definitely and concisely; the treatment is throughout clear and logical; and the references show a painstaking research into all the important source material bearing on the subject.

T. W. VAN METRE.

University of Pennsylvania.

REPORT OF THE BOARD OF DIRECTORS, YEAR END-
ING DECEMBER 31, 1914, AMERICAN ACADEMY OF
POLITICAL AND SOCIAL SCIENCE

I. REVIEW OF ACADEMY'S ACTIVITIES

During the last year there is no special change to report in the methods of conducting the work of the Academy. There is, however, a change in personnel which calls for comment. Owing to the tremendous increase in work caused by the appointment of Prof. Emory R. Johnson to the Public Service Commission of the state of Pennsylvania, he found it necessary to resign his position as Editor of *THE ANNALS*, having been editor since 1902. A large part of the influence which the Academy has gained through its publications is due to his efforts. Professor Johnson still remains a member of the Board of Directors and continues his interest in the work of the Academy. Though we deeply regret the necessity for change, the Board is pleased to report that in the person of Dr. Clyde L. King we have secured another enthusiastic worker to take his place. Dr. King has been Assistant Editor of *THE ANNALS* since September, 1912, and, therefore, is ably prepared for his new duties.

In many ways the greatest loss which the Academy suffered this year was the death of Mr. Stuart Wood who, since the establishment of the Academy, had served as its Treasurer. Faithful and conscientious in all his work, careful and conservative in all the investments of the Academy's funds, he proved himself a devoted friend and wise counsellor. We are fortunate, however, in having been able to secure the consent of Mr. Charles J. Rhoads to serve as our Treasurer. That so busy a man as Mr. Rhoads should be willing to assume this obligation is but another indication of the respect which thinking men have for the work the Academy is doing. It should be remembered further that Mr. Rhoads, in common with all the other officers of the Academy, performs these duties without compensation.

Dr. L. S. Rowe, who has been President since 1902, and to whose untiring efforts and ability the growth and service of the Academy are largely due, returns to his position as President of the Academy

after a leave of absence of nearly a year for research work in South American countries. His work has been cheerfully carried and effectively forwarded by Dr. Carl Kelsey as Acting President.

The position which the Academy has come to occupy in public life in this country is evidenced, to the satisfaction of the Board, by the fact that in spite of the great business depression the membership has suffered but a slight loss. There also is much evidence that *THE ANNALS* is used increasingly by students of social questions, as during the last year a goodly number of libraries have added it to their regular list.

Plans for the celebration of the Twenty-fifth Anniversary of the founding of the Academy were well under way last summer, when the war broke out in Europe. Inasmuch as we had hoped to have some of the European members present, and also in view of the additional fact that the President of the Academy was on a trip to South America, from which he would not return until the beginning of 1915, it was deemed necessary to postpone this special celebration for another year.

II. PUBLICATIONS

During the year 1914 the Academy has published a series of volumes which have brought together the best thought of the country on the important problems with which these volumes deal:

January: Housing and Town Planning.

March: Reform in the Administration of Justice.

May: State Regulation of Public Utilities.

July: International Relations of the United States.

September: Government Regulation of Water Transportation.

November: Women in Public Life.

Your Board desires to take this opportunity to express its obligations to the Editor-in-Chief, to the Assistant Editors, and to the other members of the Editorial Council for their unselfish devotion to the publication work of the Academy.

III. MEETINGS

During the year 1914 the Academy has held the following meetings:

January 20. Future of Political Parties in the United States.

February 26. Relation of the Federal Government to Trusts and Industrial Combinations.

April 3. (Eighteenth Annual Meeting.) The Present International Relations of the United States.

November 13-14. Public Policies as to Municipal Utilities. (Conference of American Mayors.)

December 5. National Aspects of the Child Labor Problem.

IV. MEMBERSHIP

The membership of the Academy on the 31st of December, 1914, was 5,527, with a subscription list of 786, making a total of 6,313. Of the 5,527 members, 1,233 are residents of Philadelphia, 4,080 are residents of the United States outside of Philadelphia, and 214 are foreign members. Of the 786 subscribers 4 are from Philadelphia, 706 from the United States outside of Philadelphia, and 76 from foreign countries. Compared with the membership on the 31st of December, 1913, we find that in the Philadelphia membership there is a gain of 13, in the membership in the United States outside of Philadelphia a loss of 126, and in the foreign membership a loss of 1, or a total loss of 114. In the subscription list there is a gain of 90 in the United States outside of Philadelphia and 6 in the foreign subscriptions, making a total gain in the subscription list of 96. The total loss in the combined subscription and membership lists therefore is but 18.

During the year the Academy has lost through death 84 of its members, 7 of whom were life members:

Foreign

Dr. Agustin Alvarez
 Thomas Richard Bayliss
 Prof. Dr. Eugen Ritter von Böhm-Bawerk
 Prof. Dr. E. Leser
 Senor Segismundo Moret y Prendergast

Philadelphia

George F. Baer	J. Ewald Dülken
B. Frank Clapp	L. G. Fouse
Prof. Charles E. Dana	James H. M. Hayes
John M. Dearnley	Hon. Samuel W. Hyneman
Thomas Dolan	W. W. Justice

Isidor Langsdorf
 Morris Pfaelzer
 Henry D. Rogers
 Dr. George Strawbridge

Miss Anne C. Swan
 Augustus Thomas
 Hon. W. W. Wiltbank
 Stuart Wood

Outside

Ralph P. Badeau
 Dr. Henry Banga
 General A. H. Beach
 George Blakistone
 W. H. Bryant
 Colonel William Busby
 Prof. Robert C. Chapin
 C. A. Clark
 Charles F. Currie
 J. Stearns Cushing
 *James S. Dennis
 F. W. Dohrmann
 Hon. Eben S. Draper
 Joseph D. Ellis
 Hon. Henry Exall
 Hon. Nathaniel Ewing
 Guy E. Farquhar
 Owen Ford
 William A. Giles
 John C. Grant
 E. H. Hall
 E. R. Henry
 Charles F. Hinckle
 L. E. Holden
 Prof. Franklin W. Hooper
 *Hon. James R. Howe
 Adrian Hoffman Joline
 Dwight A. Jones
 Louis Jones
 Rev. A. Kaupas
 J. M. Lawford

Woodward Leavenworth
 Prof. Gustav Le Gras
 William Lummis
 William D. Marks
 T. A. Matthews
 C. G. Messerole
 Frank R. Morse
 H. Mosenthal
 Louis T. Nolker
 Charles W. Ogden
 Benjamin S. Palmer
 Hinsdill Parsons
 Louis W. Powell
 Samuel F. Prince, Jr.
 George M. Robbins
 Henry C. Schaertzer
 Herbert A. Scheffel
 F. A. Schwertner
 John P. Scripps
 Simon H. Stein
 *Baron Strathcona
 F. L. Taft
 Hon. James Tillinghast
 William S. Warren
 William De H. Washington
 *George Westinghouse
 Dr. John R. Whiteside
 Benezette Williams
 *Rev. S. H. Winkley
 Henry C. Wood

* Life Members.

The death of these members has deprived the Academy of some very warm friends and enthusiastic workers.

During the year the Academy has lost by resignation and deaths 757 of its members and 29 subscribers, while 643 new members and 125 new subscribers have been added to the list.

V. FINANCIAL CONDITION

The receipts and expenditures of the Academy for the fiscal year just ended are clearly set forth in the Treasurer's report. The accounts were submitted to Messrs. E. P. Moxey and Company for audit and a copy of their statement is herewith appended.

In order to lighten the burden of expense incident to the annual meeting a special fund amounting to \$1,305 was raised. The Board takes this opportunity to express its gratitude to the contributors to this fund.

VI. CONCLUSION

Your Board takes this opportunity to thank the members and friends of the Academy throughout the country who have been zealous in furthering its work, both by the securing of new members and in the way of suggestions of topics to be discussed, either in public meetings or in *THE ANNALS*. We owe a special debt of gratitude to those men and women who have contributed to the various volumes of *THE ANNALS*.

Philadelphia, January 13, 1915.

CHARLES J. RHOADS, ESQ., TREAS.,

American Academy of Political and Social Science, Philadelphia, Pa.

DEAR SIR: We herewith report that we have audited the books and accounts of the American Academy of Political and Social Science for its fiscal year ended December 31, 1914.

We have prepared and submit herewith statement of receipts and disbursements during the above indicated period, together with statement of assets as at December 31, 1914.

The receipts from all sources were verified by a comparison of the entries for same appearing in the Treasurer's cash book with the record of bank deposits and were found to be in accord therewith.

The disbursements, as shown by the cash book, were supported by proper vouchers. These vouchers were in the form of cancelled paid checks or receipts for moneys expended. These were examined by us and verified the correctness of the payments made.

The investment securities listed in the statement of assets were examined by us and were found to be correct and in accord with the books.

As the result of our audit and examination we certify that the statements submitted herewith are true and correct.

Yours respectfully,

EDWARD P. MOXEY & Co.,
Certified Public Accountants.

Balance Cash on hand January 1, 1914 \$ 3,523.55

Receipts

Annual dues.....	\$23,432.63	
Special Contributions.....	1,305.00	
Subscriptions to Publications.....	2,975.16	
Sales of Publications.....	3,610.32	
Income from Investments.....	3,112.50	
Interest on Deposits.....	94.95	
Miscellaneous Receipts.....	229.18	34,759.74

Disbursements

38,283.29

Office Expense

Office Salaries.....	\$8,702.82	
Special Clerical Service.....	8.25	
Supplies and Repairs.....	789.83	
Stationery.....	381.45	
Telephone and Telegraph.....	118.11	
Postage.....	455.89	
Freight, Express and Carfares.....	28.74	
General Expense.....	62.00	\$10,547.09

Philadelphia Meetings

Hall Rents.....	\$375.50	
Stationery, Engraving and Printing.....	971.55	
Clerical Services.....	106.10	
Expenses of Speakers.....	717.22	
Postage.....	235.15	
Telephone and Telegraph.....	32.61	
Carfare, Newspapers and Sundries...	14.99	2,453.12

Publicity Expense

Pamphlets, Cards, Letters, Circulars and Advertising.....	\$222.00	
Postage.....	603.00	
Stationery.....	391.75	1,216.75

Publication of Annals

Printing.....	\$7,574.81	
Reprints.....	473.88	
Binding.....	396.78	
Postage.....	1,026.79	
Advertising.....	5.00	
Stationery.....	339.11	
Carfare, Expressage and Sundries	91.43	
Telephone and Telegraph.....	66.98	
Storage and Insurance.....	21.11	9,995.89

24,212.85

Balance December 31, 1914 \$14,070.44

Forward.....		\$71,045.00	
Cash:			
In Academy Office.....	200.00		
In Treasurer's Hands:			
Centennial Nat'l Bank.....	200.00		
Girard Trust Co.....	13,595.50		
Amount due from A. S. Harvey.....	24.60		
Amount due from E. Tornquist.....	50.34	14,070.44	
			<u>\$85,115.44</u>

LIABILITIES

None.

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THE AMERICAN INDUSTRIAL
OPPORTUNITY

The Annals

VOLUME LIX

MAY, 1915

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Handwritten notes:
17-5-15
11-2-15
no plates

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
36TH AND WOODLAND AVENUE
PHILADELPHIA
1915

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EUROPEAN AGENTS

ENGLAND: P. S. King & Son, Ltd., 2 Great Smith St., Westminster, London,
S. W.

FRANCE: L. Larose, Rue Soufflot, 22, Paris.

GERMANY: Mayer & Müller, 2 Prinz Louis Ferdinandstrasse, Berlin, N. W.

ITALY: Giornale Degli Economisti, via Monte Savello, Palazzo Orsini, Rome.

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FOREWORD

BY J. RUSSELL SMITH,

Editor in charge of this volume.

Tipsy soldiers sacking a town overload themselves with loot. They fairly wallow in a surplus of property, they trample it under foot. Similarly the people of the United States wallow in opportunity for comfort and riches. Yet the bread line stands, the charities are overworked at the same time that unemployment pinches millions and rots the staying qualities of our erstwhile workers.

This situation becomes the more ironic, the more belittling to man with all his boasts, when we stop to consider the possibilities in which we live. Mr. Keir (see page 1) shows that in resources we are actually several times as well off per man as the richer of our European brethren were before the war began; and resources are the stuff that wealth is made of. We have large room for increased production through the improvement of the public health and prolongation of life (see Norton, page 29). It is little trouble for the corn club boys to triple or quadruple the national average yield of corn, that king of crops; agricultural and technical education can easily double and more than double our productive ability (see True, page 51). Dr. Spillman shows how the efficiency movement (see page 65) easily doubles output on the farm with little or no increase of effort. Mr. Gilbreth, the pioneer efficiency engineer in the field of motion study, shows the easy way to a 100 per cent increase in output in vast industrial fields by merely taking thought (see page 96). The wonders of scientific management in doubling and tripling output are too well known to need rehearsing here but it is a fact that it is rarely used as yet. American industry is in parts surprisingly inefficient as secretary Redfield has recently shown. Mr. Martin (see page 77) shows how the scientific management idea is being applied with great savings and greater possibilities in that wasteful chaos we call distribution.

Altogether it is not difficult to figure up a total possibility of 300 or 400 per cent easy increase in the national production by the

general application of methods now well known and practiced by thousands. The articles on research (see Waite, page 40, and Whitney, page 86) show that this movement has but begun. Why should children work when men stand idle? Why should carpets and shoes and chairs be scarce (*i. e.* wages low, see Nearing, page 111) when we can make three times as many of them as we do?

The environmental origin of things is very familiar to the geographer, but Mr. Walsh carries it on by making a very forcible statement of the wage environment as a creator of ideas (see page 104).

Here we stand with reasonable possibilities of 300 or 400 per cent increase in national wealth but we are now not even fully using our equipment at the low efficiencies that we at present tolerate. The article by Mr. Reitzel on page 125 reveals the shocking unemployment of a normal year like 1912. We have in our midst the final lunacy of the ages—an industrial depression—unused resources, piles of raw materials lying inert, rows of fully equipped factories with their machines standing silent and idle, thousands of men and women hungry, poor, half naked, clamoring merely for the chance to work and at rates that are grossly inadequate (see Nearing, page 111). That is the stuff that changes are made of—unwise changes perhaps. To those who can read, there is a hand writing on the wall.

I am not blaming anyone for all this. As nearly as I can discern there is not very much blame to be dispensed. It has just happened. The facts are that we have made industrial changes faster than we could adjust them, we have made them so fast that civilization has an awful stomachache from undigested improvements. The alarming fact is that when a pain passes a certain point a person will take anything that is offered.

That world paralysis, the industrial depression, should, so long as it remains upon the earth, produce a sense of disgrace in every economist, every legislator and every captain of industry. What causes the depression? I confess to shame. I should be greatly humiliated if the man from the moon asked me about it.

Dr. Patterson's paper (see page 133) gives a very valuable summary of leading theories for the cause of financial depression. Our great ignorance of this subject is shown by this variance of our notions, a variance which serves forcibly to illustrate the gravity of the problem.

While this darkness continues we have little chance of final solu-

tions, but we must do something and the public employment bureau is a natural first aid (see Hodges, page 165, and Barnes, page 185) but it *makes* no jobs except for those who run it. More can be done by the development of an employer's sense of responsibility so that he looks at his workers as people whom he wants to help to a full year's work rather than to having them hang round partly unemployed, so that he can get them on demand (see Cooke, page 194). Let us hope for the early arrival of the day when no large employer of labor will find it possible to say as one said last month—

“Mr. Smith, this social uplift is the silliest thing I know.” It is probably true that Mr. Pfahler's profit-sharing plan (see page 200) will do much to increase this feeling of solidarity. Vast things could result if 10,000 men of influence should become mildly obsessed with the idea that regularity of industry in the United States was worth working for and sacrificing for. If it could only become the style.

This problem, the depression with its unemployment, seems to come with increasing frequency and is a problem of such gravity that it is but natural that many, like Mr. Guggenheim of the Smelter Trust, should in dismay turn to the government for their solution (see page 209). Admittedly we have trifled with the problem this time; from the national administration down we have done little more than develop soup kitchen expertness and not enough of that. This fact makes all the more important an examination at this time of the only two claims that pretend to cope with the whole problem, the only “panaceas” in sight. On pages 148 and 157 two of the greatest enemies in all philosophy glare at each other—Mr. Hall, the individualist, who will cure it all by breaking up the land monopoly and giving individual initiative a real chance; and Mr. Spargo, the collectivist, who says that if the right to work can only be realized through the assumption of the control of industry by the state, that step will be taken. Who will say that both or which one is wrong in his prediction?

The collectivist, Mr. Spargo, further points out that production is not organized primarily for the purpose of supplying needs, but for the purpose of affording profit to investors. In this change from profit to service lies the millennial revolution that he would have.

As to how this reorganization from profit basis to service basis is

to be made, this paper, as is the case with most collectivist papers, is as bare of method as are the minutes of that famous mouse meeting where they resolved to bell the cat. But the really important point is that the collectivist does not have to furnish the method. It has been done for him. The world's greatest promoter of socialism died the other day in this city leaving the method behind him. Frederick W. Taylor, the world-famed exponent of scientific management, has done more for socialism than Karl Marx or any school of theorists. The theorists merely painted a wish. Mr. Taylor, who was anything but a socialist, showed them how to get it. He projected into men's affairs with great emphasis and convincing evidence the idea of standards. The illness of a man of national reputation prevented our having a paper on this subject, but recent happenings show the point. Last fall at the Mayors' Conference in Philadelphia, the quarrel between the champions of public ownership and of private ownership of municipal enterprises, centered upon the point of efficiency. Here is where Mr. Taylor contributed. Ten years ago the critic used to tell the man on the inside that he was inefficient. The man inside would say "you're a liar"; the man outside would say "you're another." They might perhaps have a fight, but the subject of the controversy was illumined by no display of facts. There were none worth mentioning, only *opinions*. Since the standardization idea has come, the critic announces that the electric company is inefficient *because* it uses one-half pound more coal per horse-power hour than the standards of good engineering practice permit. Since this is a matter of record all the electric company can do is to squirm, and try to show good reasons why it should be different from the standard. The significance of this change is difficult to appreciate.

Granted a half-way decent desire for efficiency in works management, it is within reach as never before and the socialist propaganda already rich in grievances is now enriched by the greatest tool ever placed in its hand for achievement.

Just as an illustration of Mr. Spargo's point about an industrial life dependent on enterprises run for service rather than for profit, I call attention to the railroad situation. I do not know what causes depressions but I do know that they are characterized by an almost complete cessation of the making of equipment. Prosperity consists of a heavy period of equipment when many producers enlarge

their capacity. We have no normal condition. Now suppose the United States government owned all the railroads and that the whole weight of governments was thrown into the problem of keeping industry going smoothly. All government equipping would be rushed in dull times and starved as far as possible in rush times. Certainly this would be a great steadier, but cannot we obtain it by other means? If not—I merely call attention to the socialist vote in the United States and Frederick W. Taylor's contribution—*standards*. I think that we have here a new call to public duty on the part of those who have power.

Collectivism may come on apace as Herbert Spencer predicted or individualism may clean house so that it will not be necessary. In either case we are faced with the necessity of making a host of readjustments if we are to adequately utilize our opportunities. When the general counsel of the Pennsylvania Railroad joins Mr. Guggenheim and the professors in demanding more government regulation of industry we may be assured that it is coming and Dr. Young (see page 212) points to a much less harassing method than we have yet had. As we tinker our machine it should never be forgot that money is the mechanism of exchange—an indispensable machine of the greatest delicacy (see Conway, page 226).

The regional relation of industry to resource in the United States is most gross and wasteful. A readjustment all along the line is demanded in the interests of economy. It would be difficult indeed to show why we should not have a series of free ports (see Howe, page 236) and modernized terminals with belt line railways and all conveniences. The business men of cities where it costs more than two dollars to switch a car anywhere in the city will be particularly interested in Mr. Barney's presentation of the terminal port (see page 245). A system of improved inland waterways (see Hess, page 259) seems to be our only escape from a lot of very expensive railroad building. Beyond a doubt, too, we need an entirely new system of railway rate-making which will gradually reduce the advantages of a few points and let industry gradually adjust itself to resources rather than pile up in a few centers that have competitive rates. Here, again, the illness of a contributor caused a gap.

The record of an easily attainable industrial city with no slums and plenty of room and play space should be of interest to the constructive type of mind (see Smith, page 283).

Foreign trade is something that we have seen but dimly through the "home market" haze and seeing it dimly it is perhaps but natural that we should as Mr. Pratt (see page 291) points out, have left many things undone in our quest for it. His call for more efficiency seems well founded. Our new and more serious point of view is shown by the recent establishment of American branch banks in South America (see Kies, page 301). It should not be for a moment forgotten, as pointed out by Mr. Pepper on page 309 and by Mr. Daniels on page 316, that the making of banks does not make capital. It merely fixes channels in which it may flow. A few American loans to South America have apparently been far more effective than mere banks. Mr. Filene's definite suggestion (see page 321) for private coöperative work in promoting foreign trade is worthy the careful perusal of all who have any interest in developing foreign markets.

The American industrial opportunity is the greatest that the world has ever offered to a numerous people. It is in brief to stop wasting resources, material and human, to apply scientific management to our productive efforts and to increase the potentiality of our efforts by better education and through continued promotion of scientific research. Above all we must master the paralysis of industrial depression and banish unemployment from a hungry world. This will give the materials for a large and much needed increase in wages.

J. RUSSELL SMITH.

THE RESOURCES OF UNITED STATES AND THEIR RELATION TO OPPORTUNITY

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National prosperity to be enduring must be founded upon natural wealth. Resources create opportunity and by giving a chance to an individual to enrich himself also promote the welfare of the country under whose flag the individual lives. Whether opportunities are rare or abundant depends upon the size of the country in which a man dwells, the number of other persons competing for the use of the same area, and the richness or poverty of natural supplies that the region affords. Opportunity may be measured by the relation between the number of people in a given locality and the free gifts that nature provides, granting of course that the residents have free access to the resources. Judged by the interrelations between area, population and resource where does the United States stand among other nations?

A large country is more apt to give a man a chance to rise than a small one, unless the major part of the large territory is too hot, too cold, or too dry to warrant development. The extension of a land over zones unlike in climate, topography and resource is a blessing brought about by size. This condition assures opportunity through variety. The people on the mountain cannot furnish the things that are easily won from the plain. The temperate zone does not have all the products of the tropics. If a nation is made up of mountain and plain, cold and hot regions, its inhabitants will be engaged in different occupations. Therefore by buying the things which it has not, each section enriches the other. The opportunity for home trade enlarges the occupations of agriculture, transportation and manufacture. The mere size of our country then is a factor in its favor. Florida differs from Massachusetts, southern California is unlike northern California, Kansas City does not resemble Philadelphia. As a consequence Florida can raise oranges for Massachusetts. Southern California is enabled to send lemons to the northern part of the same state. Kansas City

ships meat to Philadelphia. On the other hand Massachusetts may sell watches, pens, pins and machinery to Florida. Northern California supplies lumber to her southern sister. Philadelphia sells carpets and stockings to Kansas City. Diversity in environment permits and produces variety in occupation, and gives rise to a large internal domestic trade. The transportation necessary to haul products from one section to another creates an additional group of occupations and opportunities. There are as many people employed by the railroads of our country as there are men, women and children in the city of Philadelphia. The total number of railroad employees is more than a million and a half. There is only one railroad, the New York, New Haven and Hartford, whose receipts from passenger traffic approach the amount derived from freight. The volume of freight arises from the difference in resources in the various parts of our country. United States is fortunate in being big.

Great Britain, France and Germany all possess internal variety. Mountain and plain present contrasts in each. But none of these nations has the extremes that are presented in the United States. This fact can be more easily seen by a glance at chart I. Whereas France and Germany extend north and south through about six and a half degrees and the United Kingdom reaches ten, our country stretches southward for twenty-five degrees. It must be admitted that in Europe greater ranges in climate are found from west to east. Eastward the modifying influence of the ocean is lost, so summers are warmer and winters colder. However, no European nation covers sufficient area from west to east to feel the extremes of both maritime and continental climate. From north to south the countries are too small to gain distinctive contrasts. Their climates are more even than that of the United States. As a consequence those differences of resource which are due to modification of weather are found more strikingly in United States than in the leading continental nations.

Mere size alone is not a sufficient gauge of the opportunities a region may afford. The number of people dwelling within the country must also be taken into consideration. A small area rich in resources but with a scanty population would grant more chances to gain wealth than a larger domain more generously endowed, but with a larger proportional population pressing upon the natural

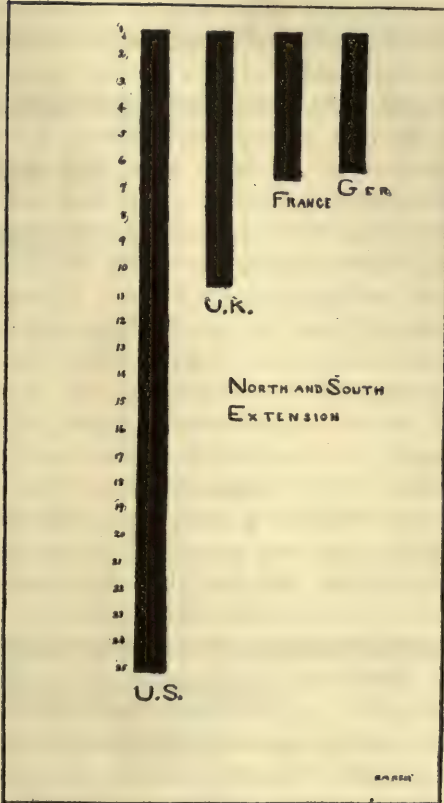


CHART I

gifts. This can be shown by an illustration. In a small farm there might be sixty acres, whereas in a larger one the fields totaled one hundred and sixty. If only three people were dependent upon the smaller place while the larger one was forced to supply the needs of ten then it is clear that the proportion of land to persons is greater in the smaller estate. In like manner a statement of the area of a country or an estimate of the tonnage of its resources means little unless the figures of population are also known, and a proportion is struck between the number of men and the amount of available wealth. The highest degree of opportunity is attained in a large wealthy country with a scanty population. To revert to our illustration: if instead of ten there were four people to be supported by the one hundred and sixty acres, then each person would have a larger share than in the homestead with sixty acres to three people. Chart III shows the population per square mile for United States as compared with some of its rivals. Although our population is more numerous than any of our competitors (see chart II) the overwhelmingly larger area of this nation with corresponding natural wealth means that the chance for the individual here is great. Only our smaller states with the largest masses of people approach the density of population of the rival nations. New Jersey has a density of 377; Massachusetts, 418; Rhode Island, 508. There is a period in the growth of a country in which an increasing population does not mean a lessening of opportunity. This comes about through the fact that with greater numbers a larger sub-division of labor takes place, which in turn occasions new ways of earning a living. It is only when sub-division has reached nearly its maximum that the pressure of population upon resources begins to be felt. After the point has been attained, further increase in numbers would mean competition for jobs and the lowering of the price of labor. Then the only relief is a limitation upon population or emigration to newer lands. The larger a country is, and the more natural wealth it possesses, the longer it will take to arrive at this end. Although it is more than three hundred years since men began to draw upon the resources of our country we have only recently begun to feel the pinch of population and that only in a few special places.

Area and population are general terms, and, although interesting, are not conclusive evidence as to the opportunities to be found

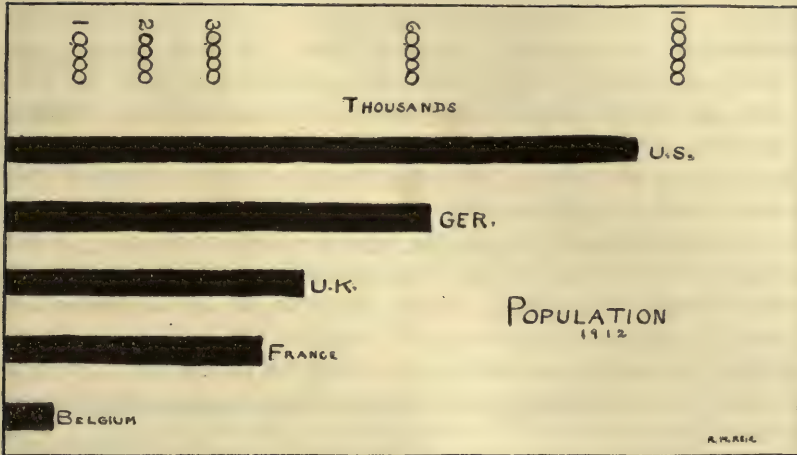


CHART II

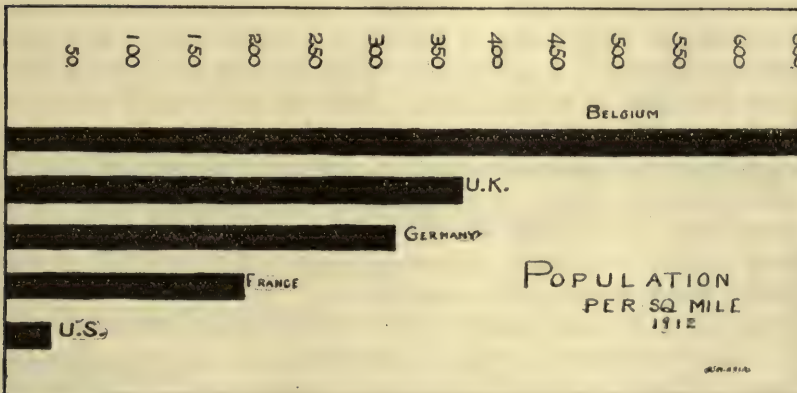


CHART III

in United States. When you turn to a more specific study of our wealth the agricultural group is the one to be considered at the outset. Wherever it is available soil is the first resource to be exploited. That is because man's primary needs of food, clothing and shelter can be supplied by the soil alone. If life is sustained by mining or manufacturing, some one, somewhere, must be at work tilling the soil to produce food and the raw materials for clothing. Therefore agriculture is fundamental whereas mining and manufacturing are secondary. Manufacturing is in reality founded upon poverty and not upon wealth. People who can gain a living easily from nature will not undergo the rigor of a factory régime. A rich land prevents the development of occupations which gain recruits only through compulsion. As an example, so far as protection, natural harbors and access to the interior are concerned, Chesapeake Bay ought to be the seat of a thriving commerce. The natural fertility of the land around the bay, however, has caused people to turn their backs upon the water and to develop the soil. With so much of the total area of our country fit for farming and with the variety afforded by the extent of our boundaries, it is not surprising that agriculture has played so important a part for so long a time in our development. A nation can exist by trade and commerce and can buy its food and raw materials from abroad, but such a nation is subject to sudden collapse if anything destroys or interferes with its only means of livelihood. An example is England's present necessity. A nation is fortunate that has at all times sufficient farm area to support itself. Forty-six per cent of the entire land mass of United States is in farms. As population increases an inventive people may contrive novel ways of sustaining life, but it usually occurs that the new methods of livelihood make a demand upon land in the ultimate. The possession of large amounts of land then is well nigh indispensable. In this essential United States stands preëminent among nations. Charts III-A and III-B bring the fact more clearly to the fore.

There are certain crops that are raised by all the leading nations. Wheat is the one which receives the greatest amount of attention. United States stands above all others in the total amount of wheat produced (see chart IV). Our harvest is more than a third greater than that of Russia, our nearest rival. We have more than enough wheat for our own people, so export 12 per cent



CHART III A

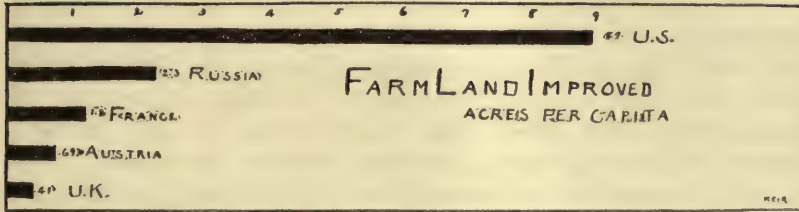


CHART III B

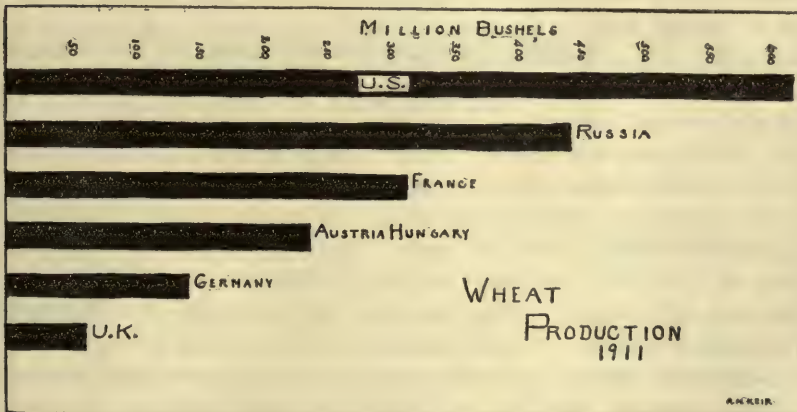


CHART IV

of our crop to help feed other nations whose wants are greater than their supplies (see chart IV-A). Although there is a closer competition in growing of oats (chart V and V-A) we lead in that crop also, but by a smaller margin. In barley (chart VI) Russia overtops us but we follow behind her and surpass the rest of the field in gross production. In bushels per capita (chart VI-A) the showing for United States is not as good as that of Europe. So far as the other two common crops, potatoes (chart VII and VII-A) and rye (chart VIII and VIII-A) are concerned the tally for our country is not so favorable, as is shown. Both of these crops are signs of poverty. Rye grows on poor land and potatoes give large yields. If a nation shows much farm area devoted to them it proves that population is pressing heavily upon the soil.

These charts do not adequately portray the agricultural supremacy of United States or the great source of wealth the farm is to our nation. The crops so far mentioned while common to the leading nations are not the most important ones in the United States. Even the much vaunted wheat is of secondary importance. If measured by value, wheat ranks fourth among our farm harvests. Corn is by far our greatest agricultural resource (see chart IX and IX-A). An area half as large again as Italy and nearly as extensive as France or Germany is devoted to this cereal. Three-fourths of all the corn raised in the world is upon American farms. In acreage corn is more than twice as important as our own wheat although our wheat crop is the greatest in the world. The reason that the majority of people slight the value of corn as a resource is because so much of it is consumed where it grows. It is not so much an article of human food or of international commerce as is wheat. Although 12 per cent of our wheat crop goes abroad, only 1 per cent of the corn leaves our shores. Since foreign nations do not bid for corn its vicissitudes do not make reading matter for newspapers, so the extent to which it influences our national welfare is little appreciated outside the corn belt. Animals on the farm eat the corn so it is not so valuable an article of freight for railroads and steamers as is wheat. There are not such great elevators for corn at shipping points to excite comment, as there are for wheat, so the place of corn in our economic life does not attract attention. It is the greatest American crop and it is distinctively an American product for outside of our confines it is little known to farmers.

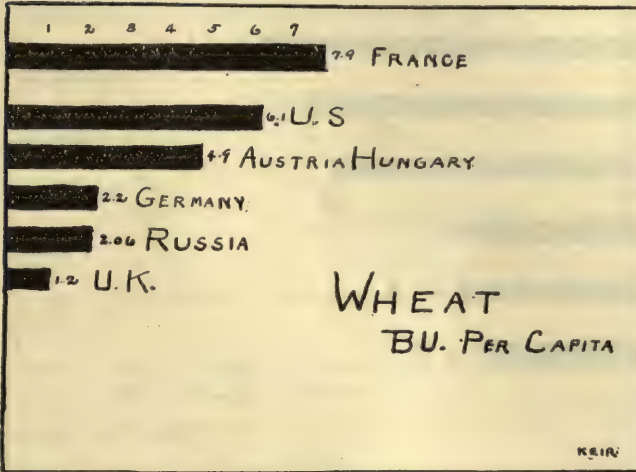


CHART IV A

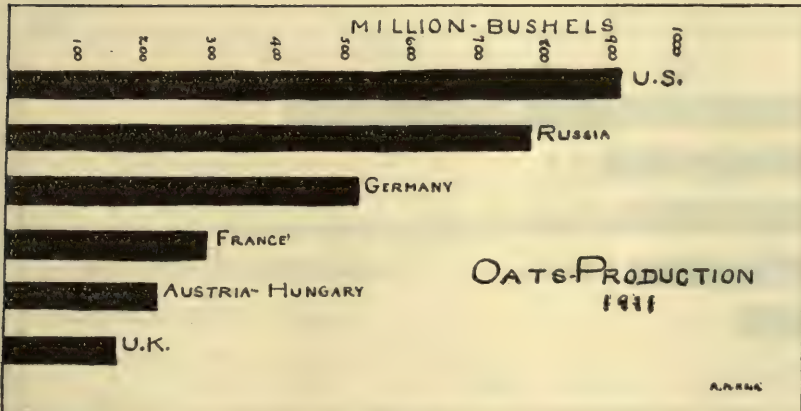


CHART V



CHART VA

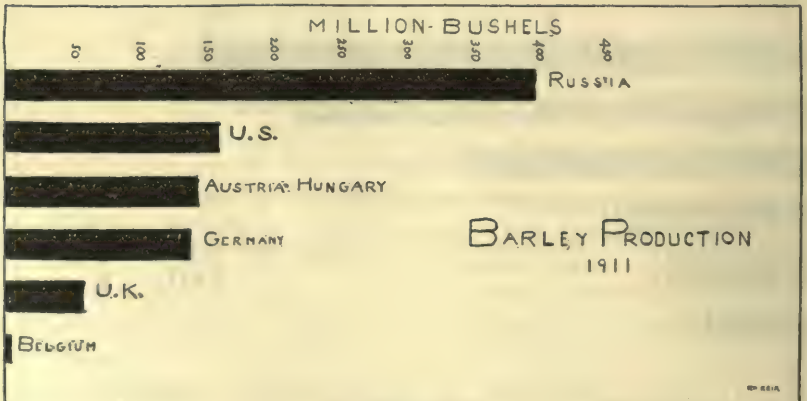


CHART VI



CHART VIA

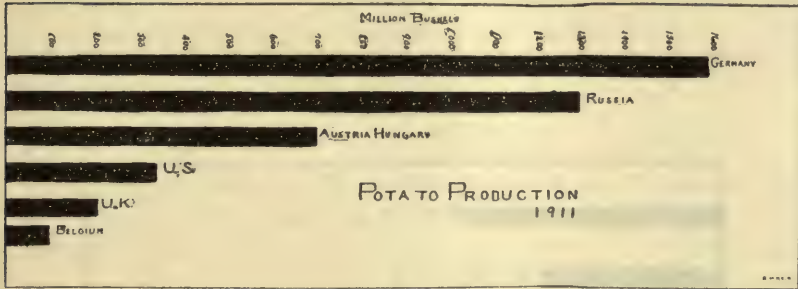


CHART VII

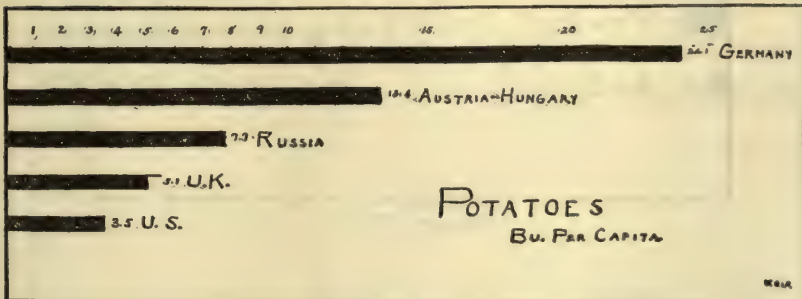


CHART VIIA

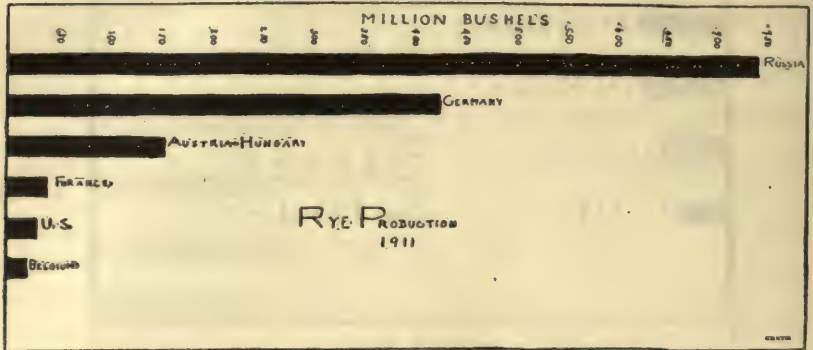


CHART VIII

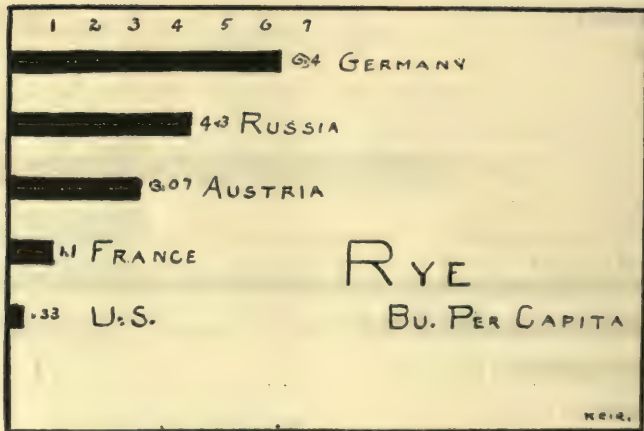


CHART VIII A

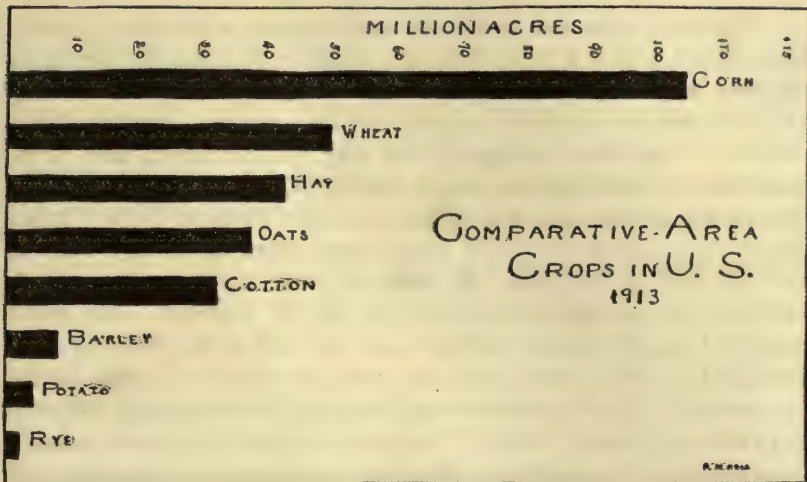


CHART IX

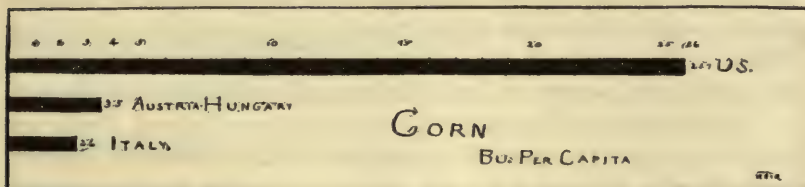


CHART IX A

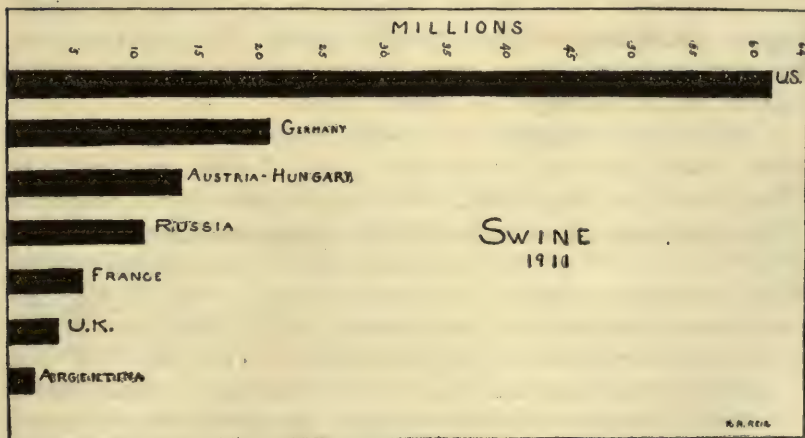


CHART X

Next in value, but not in amount, to corn, stands hay. Aside from wheat, which is next to corn in number of acres devoted to it, the two chief crops of United States are hay and oats. Corn, hay and oats are not foods for people but for animals. Our predominance in these three crops explains why we have been able to be exporters of meat for so many years. Especially significant is the relation of the corn crop to the number of swine in United States (chart X). There are more than three times as many swine in our country as are found in Germany, our nearest rival. Pork products are an important article of diet in America. Our great resource in pork animals enables us to vary our tables with the most beneficial results. Both hay and corn are used to fatten cattle for market. Despite the hue and cry over the lessening resource in cattle our country leads in number of heads by a wide margin (chart XI). It is fortunate that our resource is so large for our demand is even greater and we import meat animals for our use. This particular case is one illustration wherein despite the vastness of our resource the wants of our population have almost caught up with it. The charts X-A and XI-A showing the number of head per capita bring out the reasons for our position in the meat industry.

Some sheep are fattened on farms but our largest flocks are found on the great ranges of the southwest and northwest. Eastern people having witnessed or read about the decline in sheep raising in America have become imbued with the idea that we are a nonentity in this business. As a matter of figures we are among the world's leaders, distancing even the United Kingdom. Our great resource, however, is balanced by a great demand and so produces relative scarcity as is portrayed in chart XII-A.

Our animal industries are closely related to our great agricultural resources found in the three crops of corn, hay and oats. There is another crop which, like corn, is distinctively American. That is cotton. Nearly two-thirds of the world crop grows in American soil. Wheat and cotton are our two agricultural exports. With the money obtained from them we pay our bills abroad. We have almost a monopoly in cotton raising, so the factories of Europe are forced to turn to us for their raw material. That puts them upon a most insecure basis and has led to attempts to obtain cotton elsewhere. On the other hand our own manufacturers are assured of a sufficient supply of raw material. No matter what happens

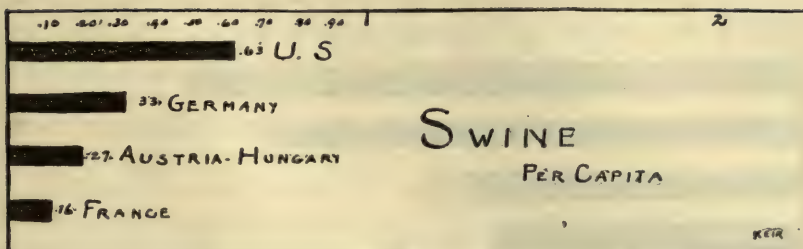


CHART X A



CHART XI

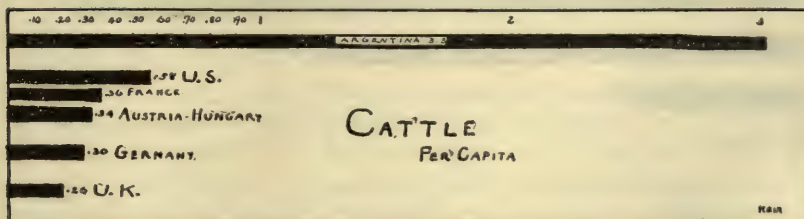


CHART XIA

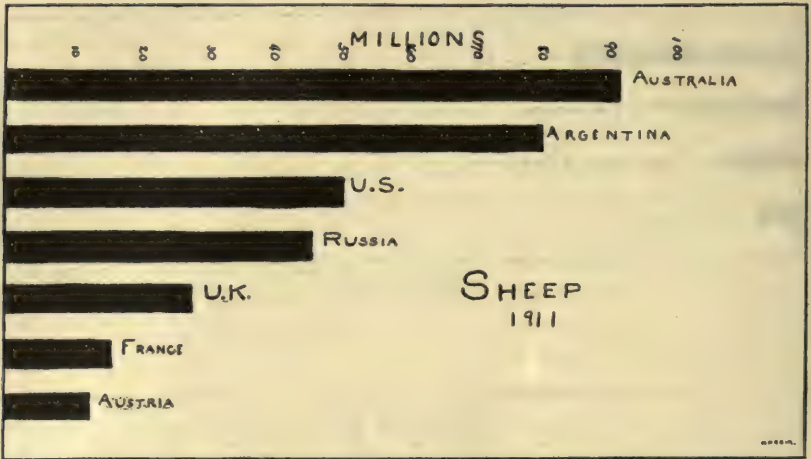


CHART XII

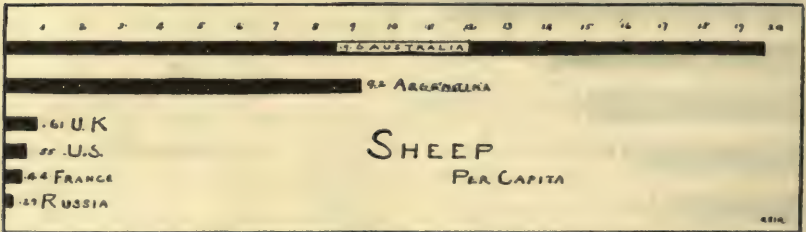


CHART XIII A

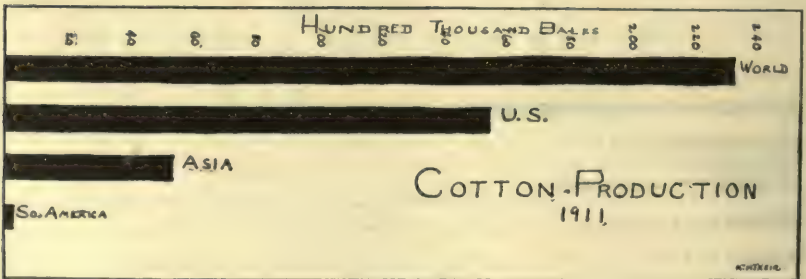


CHART XIII

in the rest of the world, American cotton manufacturers need not fear a curtailment of business because of lack of substance upon which to work.

In corn, wheat and cotton the farms of United States possess a resource that places the nation on a firm basis both in regard to food and crude stuff for our factories to manipulate.

Unless new lands are constantly available, farming cannot long continue except some means of restoring to the soil those elements of plant food taken from it by successive harvests is discovered. Of all the things growing crops need, those most often lacking in the ground are potassium, nitrogen and phosphorus. At present Germany supplies the world with potash because she has vast deposits of rock from which this element may be easily obtained. But we are just learning to be independent of Germany by utilizing the kelp that grows along our shores in the place of potash rock. For years Chile held the monopoly of the nitrates needed by agriculturists. The need for substitutes has produced them. We now know that certain plants have the power to extract nitrogen from the air and secrete it in their roots. Bacteriologists have aided farmers also by showing that minute organisms have the same power of making use of the nitrogen in the air. Finally man himself can take toll from the large supplies of nitrogen in the atmosphere, separating it by means of a powerful electric current. Our large resource in water power will enable us to generate current so cheaply that we can obtain nitrogen from the air at low enough price to sell it as fertilizer. The last of the three essential elements for soil fertility is phosphorus. No adequate substitutes have yet been found for phosphate rock. In this resource United States stands almost alone. Before 1906 our own farmers derived phosphate from Florida, Tennessee and South Carolina. Between 1867 and 1913, forty-five million tons were taken from these three states. It was estimated that only fifty-eight million tons remained. The only other available sources of phosphorus were in Tunis, Belgium and France. In 1912, three million tons were taken from our deposit whereas Tunis produced only one million and France and Belgium together but half a million. So it was a decidedly good stroke of fortune that gave to United States by the discovery of new fields in the west, an enormous new supply of phosphorus. The estimates of the western resource place it as immeasurably

greater than all known deposits in the world. There are about one-half billion tons of high grade rock in sight. As yet this rock does not influence the market because of its newness, the lack of railroads, the high cost of transportation across the continent, and the remoteness of the resource from the places where it would be used. Eventually, however, with the exhaustion of our southern supply, not only the United States but the whole agricultural world will have to draw upon our west for this most crucial element in soil fertility. In consequence United States not only is wealthy in farm lands per capita but also owns the means to keep the fields productive.

Forest resources are related to agriculture. Farmers' woodlots comprise 95 per cent of the available wood supply east of the great plains. In our early history forest resources were so abundant as to be a menace. Trees occupied the ground needed for farms. Instead of being regarded as a thing of value a tree was looked upon as a nuisance to be eradicated. So forests were ruthlessly butchered to make way for plows. Later when lumbering companies began operations, so vast were the stretches of trees that no pains were taken to be frugal in the cutting, and much unnecessary waste occurred. The oldest, most thickly settled portions of the nation have seen a positive elimination of forest resources because naturally the trees nearest to market on easy transportation routes would be cut first. As a result only 65 per cent of the original forest now remains. This present area is compared to those possessed by the leading European nations in chart XIV. The proportion forests bear to our total land area is shown in chart XV. The careless manner in which we have used good wood for temporary articles contrasted with the painstaking economy in Europe indicates how much greater than theirs our timber supply has been. But even in United States we are beginning to put on the market cheaper woods for short-lived commodities, and to veneer high grades instead of employing solid pieces. We have not exhausted our supply, but one or two object lessons have taught us that undue prodigality does not pay.

Turning from agricultural and forest resources to those needed for manufacturing, let us consider the raw materials we possess and some of the sources of power necessary to turn the raw materials into finished products. Some of the crude stock such as cotton,

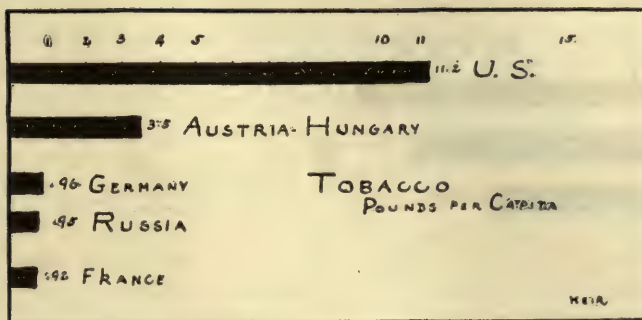


CHART XIII A

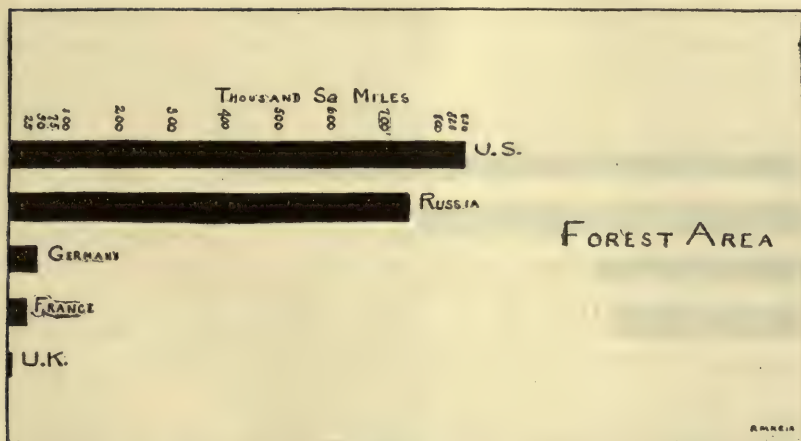


CHART XIV

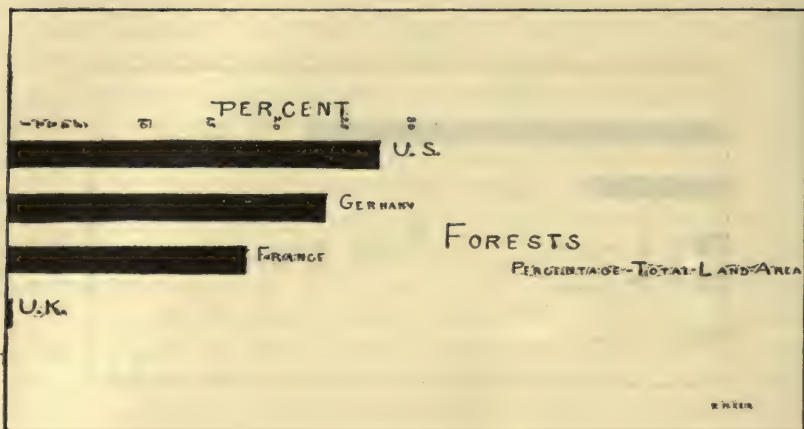


CHART XV

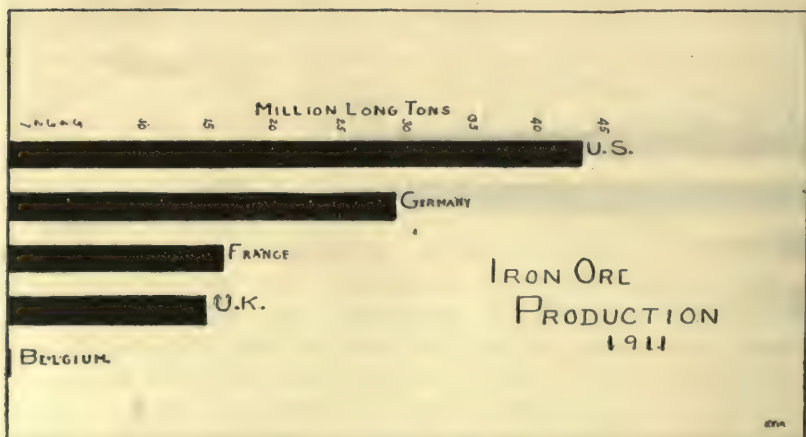


CHART XVI

flax, wood and wool for factories comes from the farms. These have already been included in the discussion of agriculture. Therefore let us review the mineral raw materials found in United States.

The chief mineral of the world not used for power is iron ore. The value of iron ore deposits depends on their availability and composition. Almost seventy-five per cent of our ores are in the Lake Superior region and therefore can reach all points along the shores by the cheapest water transportation. Special vessels have been built for the carrying of the largest quantities of ore across the lakes in the quickest time. Iron producers along the waterfront can unload their raw materials right on their own premises. Pittsburgh is favored by the lake transportation also because the longest part of the haul for her iron is by water. The eastern producers are handicapped by an overland route from the lower lake depots and so tend to import their raw materials from Cuba or Spain with water carriage rather than use American ores. However we have no great advantage over Great Britain and Germany in the matter of availability of ore deposits. The English iron producers are near the coast and can get their ores from near at hand or like our eastern iron makers may import it by water from abroad. Germany too can take advantage of the Rhine River for water transportation. Our chief advantage does not rest so much upon the availability of the ore deposits as it does upon their extent and composition. The size of our fields in comparison with our foreign competitors is shown by chart XVI. If iron ore contains phosphorus, difficulty is met in its reduction and the maintenance of a high quality of iron. Fortunately, our deposits, except the southern ones in Alabama, are nearly free from this deteriorating agent. The percentage of iron in the ore and the ease of mining it are two other important considerations. Our Lake Superior ores are among the richest in the world and are so near the surface and so easy to mine that steam shovels can be employed for the work. This has an important bearing upon their value to our blast furnace operators because it makes the raw material cheap and is an offset to labor cost, which is higher here than abroad. The United States is the greatest iron maker in the world, and her industry rests upon domestic ores. The amount of ore import into our country is comparatively small, amounting in 1913 to about four per cent of that mined within our own bounds. Both England and Germany

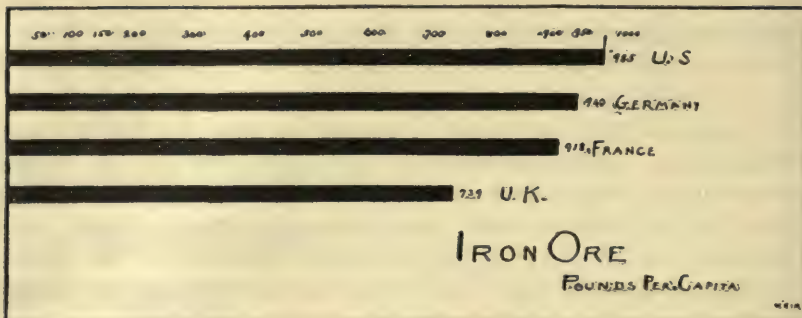


CHART XVII

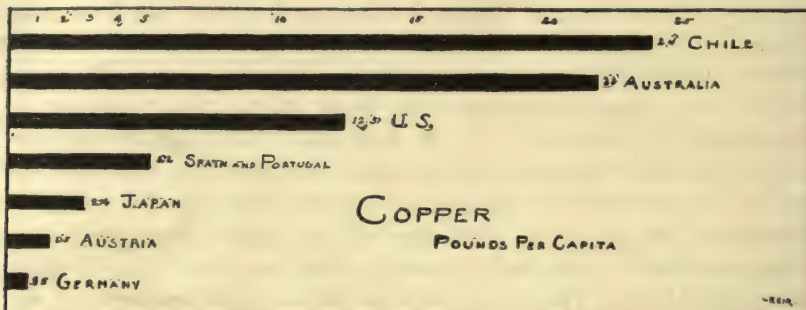


CHART XVIII

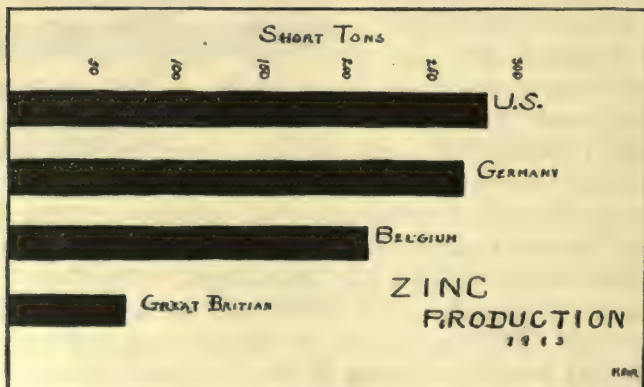


CHART XIX

are unable to produce enough ore for their own furnaces and are forced to import large amounts.

Copper is derived from copper ores, and as a by-product from many other ores such as lead, gold, silver and zinc. We cannot estimate the amount of our copper resource as accurately as our iron or coal. The only way we may measure our wealth in copper against the rest of the world is by figures of production. Fifty-five per cent of the copper used by the people of the whole globe comes from United States. We have no serious European rival. Spain and Portugal receive the greatest credit in continental production but even these have but one-tenth of our production. Japan competes with us but on a par with Spain and Portugal. Australia falls somewhat below these three. Nearer home we have the production of Mexico and Chile with which to contend. Of all of those working with the same metal, Mexico comes closest to our production, but whereas Mexican output is measured by a hundred million pounds ours reaches over a billion. About half of the copper refined by the world is used for electrical apparatus. Half of the remainder forms one of the raw materials for brass. Since both of these are essential to our economic welfare, our wealth in copper is a cause for congratulation.

Lead and zinc are not so important as resources or as widely useful in manufacture, as iron and copper. For instance, the chief use of lead is for the manufacture of paint. One-third of the lead produced is used for this purpose. Compared to the multifarious uses of iron, lead sinks into insignificance. Nevertheless, it is a resource of considerable value. Zinc finds its largest market as a protective covering for iron that is exposed to weather. A large amount of it forms one of the raw materials for brass. Charts XVIII and XIX show the importance of lead and zinc as resources in the leading countries of the world. Thirty-two per cent of the world's lead and 29 per cent of the zinc come from our country.

Since 1830¹ the United States has been an important source for the world's supply of the precious metals, gold and silver. Africa, United States and Australasia are in a class by themselves in the production of gold. No other part of the world's surface even remotely approaches these three leaders. Africa supplies 45 per cent, United States, 20 per cent and Australasia, 11 per cent.

¹ 1830, silver; 1850, gold.

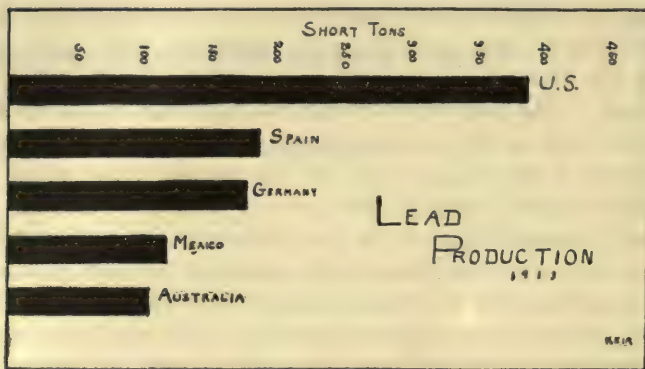


CHART XIX

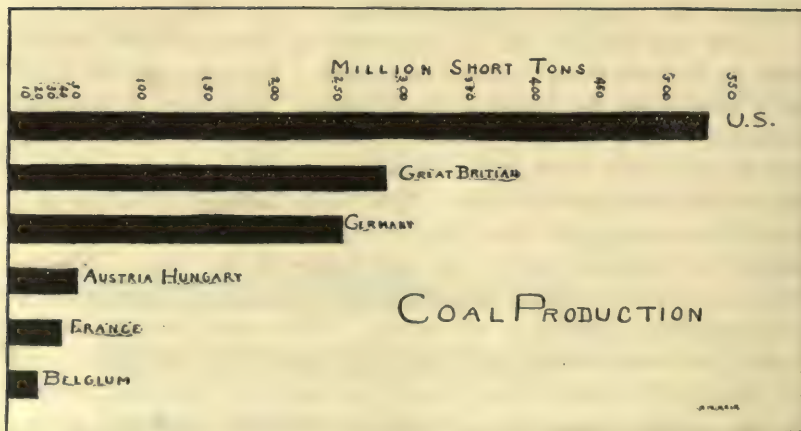


CHART XX

In manufacturing, power is just as important an element as the possession of raw materials. In some industries the availability of power decides where the crude stock shall be made into finished products. Thus the presence of fuel determines the location of iron manufacture and not the ownership of iron ore. Nations which have within their confines quantities of ore without fuel are not iron makers but ore exporters. For example, Spain and Cuba own deposits of ore but since they lack fuel send the ore to England, Germany and United States for manipulation.

The principal source of all mechanical power at present is coal. All of the great nations have large coal fields. Perhaps it would not be too much to say that they would not be great if they did not hold coal. Coal is the most important of all mineral products, even surpassing iron in that respect. Belgium has a place among manufacturing nations that is astonishing if her area and population only are considered but is easily understood if one looks at her coal resources (see chart XX-A). Since coal is so all-important, it is comforting to Americans to discover that 60 to 70 per cent of the known coal deposits of the world are within our territory. It is a cause for additional gratification to learn that besides being greatest in amount our coals are of the highest known quality. Quality is determined by heating capacity. The higher the percentage of carbon in coal, the greater will be its power to throw off heat. The harder coal is, the greater will be its proportion of carbon. The anthracite or hard coal deposits of America are by far the most important of any in the world. Only in Wales is there a coal that approaches the quality of the anthracite found in United States. Even these Welsh coals are not nearly so good as ours and would be classified here as between our anthracite and soft (bituminous) coals. Although we have the largest area of anthracite in the world, except possibly China, the actual number of square miles in the anthracite fields is puny compared to our own bituminous or soft coal deposits. In anthracite we have less than one-thousandth of the area we ourselves possess in bituminous. The actual figures are 496 square miles for hard coal and 500,000 square miles for the soft variety. Although we have a virtual monopoly of the anthracite deposits of the world, we are by no means so fortunate in regard to bituminous. Despite the fact that all our great rivals own large fields of coal, none of them is of such vast extent as ours. Chart

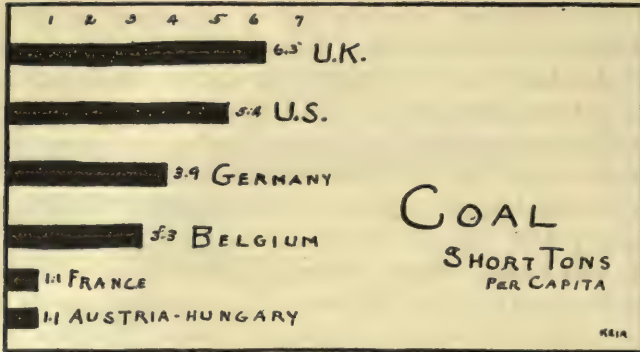


CHART XXA

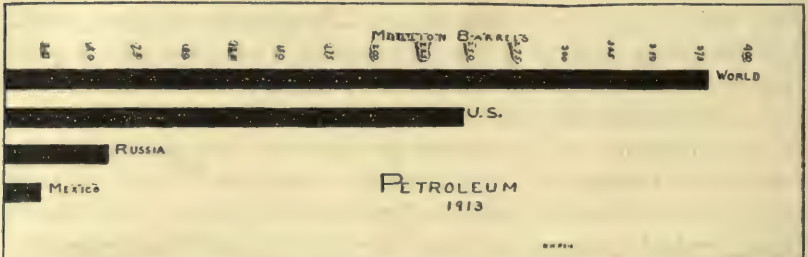


CHART XXI



CHART XXII

XX illustrates the supremacy of United States in this most significant source of power. It is estimated that we have 500,000 square miles of coal lands. This area about equals the combined land mass of Germany (208,795 square miles), France (207,129 square miles), and the United Kingdom (121,316 square miles).

Next to coal the most important mineral power producer is petroleum. About one-fourth of all the oil taken from the ground in United States is used for this purpose. As United States furnishes the greatest tonnage of coal, so with petroleum, we contribute the largest number of barrels to the world. In 1913, 65 per cent of the whole supply came from our wells. Our only serious rival in Europe is Russia. Her wells on the Caspian Sea have threatened our supremacy at times, and even for a short period exceeded the output of United States. Russia led the world between 1898 and 1902. Since 1902 new discoveries have constantly increased the American yield until in 1913 Russia our nearest competitor produced less than one-fourth as much as we did. The wells of California alone, our largest field, supplied over a third more than Russia.² Whereas we produced 65 per cent of the world's total in 1913, Russia reached only 15 per cent. The next nation on the list is Mexico with 6 per cent. The United States has given to the world more than one-half (59 per cent) of the oil used since its discovery.

Natural gas is closely associated with petroleum. It is largely used in the regions where it is found and is particularly valuable to steel, glass, and cement mills. The amount consumed industrially in 1913 was worth thirty-seven million dollars, but, since no other nation employs natural gas for industrial purposes, we have no basis for comparison. The area covered by gas wells is more than twenty times as extensive as our anthracite coal fields. Wherever it can be obtained, natural gas is the most ideal fuel there is. All others must be turned to gas before they are burned most efficiently. No other gas fuel is so pure nor so rich in heat value as this one. Abundance makes gas cheap while quality causes it to be most desirable. As a result mills located in natural gas regions are doubly blessed.

At the beginning of this paper it was pointed out that opportunity does not depend entirely upon resources but also upon the

² Russia, 60,935,482 barrels; California, 97,788,525 barrels.

number of people who utilize them. If the resources decline while the population remains stationary, opportunity also diminishes. In case population increases while resources remain stationary, again does opportunity become less. Should population grow at the same time that resource decreased, opportunities vanish rapidly. It is this last condition that is facing United States. While it is true that we are remarkably wealthy, it is also a fact that our natural wealth is being depleted at an astonishing rate. Farm lands are worn out by incorrect cultivation and erosion. Forests have been wasted by reckless cutting. Mineral wealth has been thrown away by careless mining. At the same time, population has been steadily increasing. Unless a halt is called upon the waste and population checked we will no longer be the Land of Opportunity, but our people, like the citizens of European countries, will have to seek fortune in new lands opened elsewhere.

That we need our raw materials at home is shown by chart XXII. Up to the year 1892 our exports were chiefly farm products. Beginning then and continuing ever since the percentage of agricultural exports to the total has rapidly declined while at the same time and for the same period of years manufactured goods ready for consumption have comprised a larger and larger proportion of the things we have sold abroad. Today the percentage is increasing more rapidly than the increase in population. With a corresponding falling off in farm exports it follows that greater numbers of men are working in factories. Two results should follow. We ought to pay more attention to conserving the wealth we have, and our efforts to gain foreign trade ought to take a new direction. We should seek to sell manufactured goods and keep our raw materials at home.

PROLONGING LIFE AND DEVELOPING PERSONAL POWERS

BY J. PEASE NORTON,
West Haven, Conn.

To promote social progress should be the aim of *constructive* economics—if we may be permitted to use this phrase to distinguish our subjects from those of *theoretical* economics. We deal with cost of production of wealth and with cost of production of labor. We are interested in understanding the elusive conception of the standard of living of our people. We are interested in the meaning of human life—its length of days, its breadth and its depth. All fields of science we draw upon in estimating, measuring and considering how social progress may be promoted.

Sumner's Conception of Social Progress

That eminent economist and profound thinker, Prof. William Graham Sumner, once remarked to the writer that he had come to look upon theoretical economics as a bankrupt science. On account of this conviction, Professor Sumner broadened his studies during the later years of his life, to include ethnology and anthropology, believing that a much wider array of facts were needed to justify even tentative conclusions in the social sciences. His conception of social progress was the product of years of research in many fields and it is with great respect that I am led to adopt his conception as the most rational one which has come to my attention. Professor Sumner held that social progress should be measured by the degree of control over the environment exercised by a social group at a given time and place. No other criterion—and he had tested many—permitted the conclusion that social progress had occurred. He saw successive eras of civilization ended abruptly by violent wars. He saw in history how devastation and desolation regularly followed civilization and prosperity.

Early Distinctions Between Ophelimity and Usefulness

Pareto refers in his writings to the distinction between utility and usefulness, and sharply to distinguish the meanings, he coined

the word "ophelimity" as equivalent to desirability without regard to the point whether the object desired was useful for continuing the existence of the individual. Professor Sumner had in mind in his conception of social progress, usefulness, rather than ophelimity. Theoretical economics have developed through the complications of the conceptions of *ophelimity* and wealth—the latter defined as material possessions having *ophelimity*.

Since men desire all manner of things which are not useful for continuing their existence, some of which are positively destructive, what generalizations of theoretical economics are applicable to a policy of constructive social progress? The slogans of *laissez-faire* derived from the writings of the early economists in regard to commerce emphasized the desirability of complete freedom from legislative interference. The purpose of legislative interference is theoretically—and often practically—to promote social progress.

Of What Does Social Progress Consist?

Sumner was wont to classify the acts of individuals into two grand divisions, probably fundamental: self-maintenance and self-perpetuation. Now the life of the individual consists of a series of acts which are capable of classification. Let us call this the breadth of life. It is interesting to maintain for several weeks a fifteen minute record, allotting one minute every fifteen minutes to writing down just what has occupied the individual during the preceding fourteen minutes. Such records show that weekly averages of the time record are very much alike. The number of hours devoted to various pursuits show how closely the individual is limited by nature, by position, and by environment. Most people devote two-thirds of their time record to sleep and to self-maintenance. These hours are occupied in performing a series of acts which are directly or indirectly ways of controlling the environment. They largely comprise acts which are in nature applications of the useful arts to the problems of self-maintenance. Thus Professor Sumner's conception of social progress includes the advances in the useful arts. In fact we may define the arts as man's "useful immaterial possessions"—useful in the sense of tending toward self-maintenance. These useful immaterial possessions keep the race alive. Some of them are rational and consciously understood—many of them are empirically practiced. If we divide the environ-

ment of an individual into two classes, the material environment as distinguished from the social environment, these useful immaterial possessions comprise two classes, the useful arts and the *mores*.

Professor Sumner's death occurred before the completion of several proposed publications, but not before the initial work upon the *mores*.

Useful Arts

By consulting the ordinary library index we find that the useful arts are mentioned and classified by the catalogues. Thus, in the quest for food under self-maintenance we have agriculture, domestication of plants, hunting, fishing; in the quest for warmth and shelter, we have architecture, building materials, clothing; in the quest for continuance of life we have sanitation, hygiene; and these all are sub-divided into hundreds of classifications. By no means unimportant are transportation, exchange, and the dissemination of intelligence; the latter sub-divided into writing, printing, education, libraries, telegraph, telephone, etc. Then, too, we find the arts of government, of war, etc.—ways of controlling the social environment. Historically the arts are intimately associated with the *mores* and a slow evolution has separated rather painfully some of the chaff from the wheat.

But these useful arts, imperfect as they are, these immaterial possessions, are capable of description, classification and inventory. When put into practice they create wealth. Given the raw materials, the man and the art, wealth may be created. The efficiency of an art in a given classification for accomplishing an operation is capable of measurement relatively to another art in the same group in time saved per unit of product. Further, for a given population, the value of an art is readily capitalized in wealth value; and wages, interest and profits, economic quantities, may be created by the application of the arts. New arts are invented by the brain of man; hence the signal importance of the conservation or, better, the development of our human resources. No clear idea of the history of the race is possible without some conception of social progress. The history of the useful arts should be written for the children. The heroes of the school should be those who discovered fire, steam, electricity, the telephone, agricultural machinery, and not the leaders of the civil wars which are forever retarding the inherent forces of social progress.

Inherent Forces for Social Progress

Elsewhere, I have suggested that the inherent forces for social progress reside in the frequency curve of exceptionality. Let us call this the depth of life. The use of frequency curves is more common in other sciences than in our own group. We are all familiar with the notion of skew curves of frequency and the median division. For illustration, a thousand and one soldiers standing in line in order of height would descend from giants to dwarfs. Rearranged by the character of height, we have a frequency curve of a group of men with respect to the physical character of height. These skew curves are convenient ways to present groups of facts and these simple constants may have some value in making our statements more precise. The important character in social progress is exceptionality; not physical but mental. We must leave to experimental psychology, for the present, the important problem of measuring potential exceptionality in the population. From researches already made by the Pearsonian investigators, we may assume as a first approximation that the frequency curve of exceptionality is a skew curve. For the present discussion, we may consider the group arranged by the character of exceptionality, ranging from the mental giants to the mental dwarfs or idiots. By exceptionality, we mean a combined index-number of the characters which favor successful application of the useful arts and capacity to improve or to add to the world's stock of useful truth. In brief such an index should be a coefficient of relative efficiency. An Edison may occur once in one million of population, possibly once in one hundred million. One invention may net, after all costs of production are met, one hour per day for all users of the invention over methods previously used. Suppose the sewing machine saves for each owner ten dollars per year. For a population of 100,000 users, the annual savings would be \$1,000,000; for 100,000,000, \$1,000,000,000. If half goes to the consumer and half to the inventor for seventeen years or more, the consumer is certainly guilty of appropriating an unearned increment. We all are beneficiaries of this enormous unearned increment, which has been handed down and which is being added to hourly.

The Cause of Social Progress

In a population of 100,000 with one inventor of grade A, whose discovery in a lifetime may result in an annual saving of \$1 per capita net, we have an increment in social income of \$100,000 through one man. If, now, we double the population and reason that in twice the population we have two inventors of grade A, we then have the increment in social income not twice \$100,000, but four times \$100,000. In other words, as a first approximation we may reason that the per capita increment in social income increases in proportion to the population, a conclusion which is pretty much at variance with the Malthusian theory of population, but which is in accord nevertheless with the steady growth of population and the increased standards of living. Further, the increment in social income from the work of the exceptional man increases as the square of the population. Finally the capitalized value of the work of exceptional men increases as the square of population, and, lastly, the life earnings of exceptional men should steadily increase with the population. The central problem in a constructive policy for social progress is the intensive development of the exceptional portion of the population. In such a program the whole people are interested. If one half the population is exceptional in comparison with the other half, the less exceptional half will produce nearly as many exceptional children as the exceptional half. In such a program, no class is left out. Those less successful today might have been the more successful had opportunity come earlier and had minor pitfalls been properly guarded by society. We may think of social progress as inherent in an increasing population, but the friction or resistance caused by the wastes of nations is at times intense. To limit by legislation *multiple initiative* is most unfortunate. Nations may go to great lengths with profit to promote *multiple initiative* which spells opportunity for the men who *can*.

Most Important Wastes of Nations

The three foremost wastes of nations are preventable war, preventable ignorance, and preventable life waste. The waste from failure to develop intensively the potential exceptionality of the population is the industrial opportunity of the hour to remedy. The importance of the technological museum and industrial and

vocational training are obvious. We should look forward to the day when a technological museum shall exist in every social center.

Is it not advisable that every individual should be taught two different self-sustaining trades selected by him from a wide variety? This would greatly assist in making labor more mobile. The writer has urged that federal aid to industrial education should be given through the agency of the army, lining up the necessity of defense with the development of exceptionality. A two-year enlistment of 200,000 young men annually, chosen for exceptionality and stationed near colleges, universities and technical schools, would bring the opportunity for industrial and technical education to large numbers and incidentally build up a magnificent army reserve of trained and efficient men. In the development of our natural resources, in the development of our human resources, nothing is more important than fitting children to earn large incomes in later life—through which sanitary surroundings may be purchased in later years—and at the same time inculcating sanitary and hygienic standards. It is important to know sanitary and hygienic standards and it is equally important to have the income to sustain the higher standards in the practice. Ignorance in regard to hygienic and sanitary standards is prevalent among all classes. This field of self-maintenance which involves the arts of wise living requires a series of investigations and widespread demonstration of results. Consider the wealth of the field; the usefulness of foods; the site of the habitat; the design of the house; chairs for correct posture; ventilation, heating, water supply, lighting, plumbing, exercise, recreation, efficiency at work, sanitary conditions of the factory, hours of labor, thrift. The field is as broad as life itself.

In 1906 the writer discussed the advisability of adding to the number of the secretaries of the President's cabinet a new secretaryship which should have to do with the conservation of human resources.¹ It is with satisfaction that we note the growing importance of the new secretaryship of labor. Those who have labored loyally to create such an office in our government are to be congratulated upon the first great step achieved. It was Mr. Bryan who suggested that the title of such a department should be labor, rather than health. Human life is now represented in the cabinet.

¹"The Importance of a National Department of Health," *Journal of the American Medical Association*, 1907.

The secretary of labor is charged with the duty of fostering, improving and developing the welfare of the wage-earners of the United States. Further, the secretary of labor is also given authority and directed to report to Congress a "plan of coördination of the powers of the secretary of labor with the powers of present bureaus, commissions and departments, so far as they relate to the welfare of labor in order to unify such activities and with a view to further legislation."

To recall to your minds a summary which the writer prepared after corresponding with a large number of sanitary experts, outlining a possible organization of such a department, it is interesting to note just what has been accomplished. We have a new secretaryship of labor which is the first great step accomplished. In the movement for a national department of health (or labor) which had the support of many organizations, the bureaus proposed in 1907-1909 follow:

- Infant Hygiene
- Education
- Sanitation
- Pure Food
- Registration of Physicians
- Registration of the Drug Industry
- Institutions of Relief
- Organic Diseases
- Quarantine
- Health Information
- Immigration
- Old Age Pensions
- Labor Conditions
- Research requiring Statistics
- Research requiring Laboratories

It was then proposed to transfer existing bureaus to a new department and to create new ones. The first great steps were to secure the new department and a secretaryship in the executive cabinet.

Already the new department of labor assumes the form which was discussed in 1907. Much, of course, remains to be done, but what many predicted was impossible, namely, the addition of a new secretary to the President's cabinet to represent life, labor and health, has now come to pass, in spite of a considerable opposition.

We no longer discuss theories but facts. What President Roosevelt said was inadvisable and what most men said was impossible to accomplish has now been done. Our gratitude goes out to President Taft for not vetoing the bill. We no longer discuss an idealistic scheme. We simply point out the few remaining steps necessary to put into operation a constructive policy of social progress.

The department of labor now includes the following bureaus:

Children's Bureau
 Immigration
 Naturalization
 Labor Statistics

Immediate Need of This Department

The immediate needs of the department of labor are first, larger appropriations, and second, transfer of certain bureaus now in other departments to the department of labor, notably the public health service now in the treasury department and the food inspection service now in the department of agriculture. New bureaus should be added, and present bureaus should be enlarged.

The bureaus which it now seems might be transferred advantageously to the department of labor follow:

Life-saving service from the treasury department.

Bureau of public health from the treasury department.

Bureau of pensions from the department of the interior.

Bureau of education from the department of the interior.

Meat inspection service of the bureau of animal industry, department of agriculture.

Bureau of chemistry, foods, drugs, etc., department of agriculture.

Population and vital statistics from bureau of census, department of commerce.

A board of national defense consisting of the secretaries of labor, commerce, army and navy might advantageously link up the activities of each department in certain ways. The natural alliance of the army and navy to industrial training has been mentioned. The army is the means through which our young men should be given an equal opportunity to acquire technological knowledge. Receiving his sustenance in return for his work as a

soldier, an equal opportunity would be offered to every young man, however poor, to acquire knowledge of use to him in later life in raising his earning power. Such education should be pursued under the direction of the bureau of education of the department of labor. There is a further relation between commerce and higher labor standards which is vital. There are certain obstacles which must be overcome. To enforce sanitary standards necessary for health upon manufacturing and other industries adds to the cost of production in many cases. This injures not only our foreign trade but also the home market. Not only can foreign nations operating under a lower cost of production through neglect of sanitary standards take away our foreign trade, but they may close down our industries at home through importation of cheaper foreign goods. A bureau in the department of commerce should check up cost of production in this country and in foreign countries. A bureau in the department of labor should check up sanitary standards in the home industry and in the industry abroad. Tariff duties should be levied compensating the home industries for the increased cost of production caused by higher sanitary standards.

Positive Program

We now have the elements of a strong department capable of lengthening, broadening and deepening human life in the United States.

The victory is more than half won. We have a broad-minded, far-seeing man in the cabinet whose devotion to the interests of human life is well known. The natural-growth force behind a cabinet officer is in our favor. The possibilities for a constructive program of social progress lies in the new department of labor. This new department represents our national vitality because this department stands for the welfare of labor and in the United States we are all laborers, not only in the sense of laboring for self-maintenance but also as laborers together for the common good. It is with great satisfaction that I include the following letter from the Hon. William B. Wilson, secretary of the United States department of labor.

DEPARTMENT OF LABOR
OFFICE OF THE SECRETARY
WASHINGTON

January 4, 1915.

DR. J. PEASE NORTON,
No. 460 Ocean Avenue,
West Haven, Conn.

My dear Dr. Norton:

I am in receipt of your favor of the 23rd instant, and have not found time until now to make response.

There are many things which the department of labor needs, and which we hope in time it will receive, in order to make its work as effective as it should be. Immediately preceding the French Revolution, Turgot, the great French reformer, put into the mouth of Louis XVI of France the following statement:

"God, when he made man with wants, and rendered labour an indispensable resource, made the right of work the property of every individual in the world, and this property is the first, the most sacred, and the most imprescriptible of all kinds of property. We regard it as one of our first duties, an act worthy of all benevolence, to free our subjects from every infraction of that inalienable right of humanity."

We have not yet reached the point where we are prepared to put into practice the idea of Turgot that the "right of work is the property of every individual in the world." The time will undoubtedly come when the individual suffering an economic loss resulting from large numbers of idle men who are willing to work, will be overcome by the development of practical methods which may be applied in such cases. To do this will mean not simply out-of-work insurance, but assurance of work. It will mean bringing the qualified man and the work together through a complete method of distribution in which municipal, state and federal branches of the Government will thoroughly cooperate. It will mean the handling of seasonal occupations in such a manner that seasonal laborers will be able to follow different occupations at different periods and in different places during the year. The Department of Labor should be furnished with means of working out these problems to a proper solution in all of their details.

The same is true with regard to safety, sanitation and hygiene, not only in places where laborers are employed but in the communities in which they reside and the homes in which they live.

The department should be given all of the means necessary for the promotion of industrial peace based upon industrial justice, not by compelling the employer to give wages, hours of labor, or conditions of employment contrary to his judgment, or compelling the workman to accept wages, hours of labor, or conditions of employment obnoxious to him, but by the process of bringing into the minds of each a better understanding of their rights and obligations to each other and to society.

I have briefly outlined but a few of the needs of the department. As I stated in the beginning, I do not expect that these things will all be supplied immediately,

but I sincerely hope that the development of public sentiment will ultimately place in the hands of the Department the necessary means for the successful working out of these vast problems.

Respectfully yours,

W. B. WILSON,
Secretary.

The industrial opportunity of the hour lies in the intensive development of our people. The agency is now at hand, the United States department of labor. What the department of agriculture has done for animals and plants, let the department of labor do for mankind. *Constructive economics* suggest the lines of effort, first, to give the opportunity to the young to learn how to do things which in later life will increase their incomes, and to discover what is best to do with the increased income—after all knowledge of the problems of the *depth* of life.

Second—to give the opportunity for those who want work to find work, to remove the narrow conceptions which permit child labor, wages below a minimum standard of living, and to ameliorate the evils of life by old age pensions, compensation for accidents, etc. There are problems of the *breadth* of life.

Third—in the great field of *length of life*, much may be done and little has been attempted. Here, death and disease play havoc and the awful waste which goes on passes comprehension. The horrors of the European war are no more than a drop in the bucket in comparison with the blood tax of pneumonia and tuberculosis. All relative values are lost sight of in the political realm. Elections succeed elections fought over petty issues—the tariff, the money question, and the thread-bare issues of the past. Completely forgotten are the real vital issues which will bring dividends into every family—a larger earning power, a higher standard of living, and longer and healthier lives. These issues are the issues of tomorrow, and when we who labor, wake, a newer and a finer meaning will lie in those grand old words—the “rights to life, liberty and the pursuit of happiness”—words copied by the founders of our government into our fundamental documents,—words which they had snatched red-hot from the philosophy of the French revolution. Not by destruction, like those in Europe who cannot reason together, but by construction and by cöoperation among all classes shall we successfully broaden, deepen and lengthen human life upon this earth.

THE IMPORTANCE OF RESEARCH AS A MEANS OF INCREASING AGRICULTURAL PRODUCTION

BY M. B. WAITE,

Pathologist in Charge, Fruit Disease Investigations, United States Department
of Agriculture.

The great new feature of the modern progress in agriculture is the rapid increase in the utilization of science and the results of scientific research as a source of information and guidance in improving and perfecting agricultural methods.

Research in agriculture may be divided into two main classes: strictly agricultural research, and scientific research. The first type is concerned primarily with actual methods of growing and utilizing crop plants with animal production, etc. It takes agricultural methods developed empirically and subjects them to critical experimentation. It gathers the methods developed in various parts of the world and tests them out experimentally, under given conditions. It utilizes precepts developed in the sciences, or rather, tests their availability for use in actual practice, by trying them out in the field. It could, however, theoretically, be carried on in part without any help from science. As a matter of fact, at the present time it is becoming more and more influenced by scientific data. All such questions as depth and kind of tillage, varieties of crops to be planted in different localities, kinds of animals to use for certain purposes, depth and distance and time of seeding and planting, varieties suited for different sections and different purposes, rotation of crops, kinds and amounts of fertilizers to use, time and amount of water, when this is artificially applied, and, in fact, the development of all the various routine practices of actual farming come within its scope.

The second type is research in the sciences which have a direct bearing on and are helpful to the development of agriculture and agricultural methods. These sciences are principally chemistry, including physiological chemistry; physics, including soil physics; zoölogy in nearly all its branches, including entomology, animal

physiology and animal pathology; botany in most all its branches, including plant physiology, plant pathology and bacteriology.

Agriculture is so broad in its scope and requirements that it utilizes, in varying degree, and gets help from, nearly all the other arts as well as from the sciences. For example, modern agriculture utilizes, to a very large extent, engineering, architecture, manufacturing and transportation among the useful arts. It also utilizes mathematics, astronomy, meteorology, geography and geology among the sciences in addition to those mentioned above.

It has been observed, by many, that farmers, as a class, are conservative—that they hesitate to take up new ideas. This is a natural result of the old-time empirical method. The farmer was compelled to stick to the time-tried methods known to be successful by long experience. Any other course than this was to invite disaster.

Referring, again, to the strictly agricultural research work, no one can accuse the present investigators in this line of being conservative. They are hunting for something new all the time. In fact, they may even be accused, at times, of being too anxious for novelties in methods and of not giving the proper weight to the best empirically developed procedures. These investigators have, at the present time, three possible sources of information in perfecting agricultural routine processes: first, the old line empirical methods; second, the results of tests with growing crops under modern experimental conditions; and third, the data and results available from the different sciences.

We are now ready to answer the question as to why science has only recently come to the aid of agriculture, particularly why chemistry and the biological sciences have been of so little use to the farmer. It seems to me the real reason is very simple. It is because our knowledge of the sciences has been so imperfect and incomplete. No one knows better than the investigating scientist the fragmentary and incomplete nature of our exact knowledge. This is particularly true of the biological sciences. Take botany, for instance; here is a science which deals with plants and with plant life in all its various phases. Why has the science of plants, until recently, been of so little use to the cultivator of plants, and why has this science lately been utilized in so many different ways with such splendid results? It is because the science itself was weak. Only

fragmentary, isolated facts here and there had been worked out; only a few of its principles had been discovered.

Bacteria had been known and described to some extent since the days of Ehrenberg (1830). It remained for Pasteur, in 1862, to prove that they were the real cause and not the result of fermentation. He discovered the first bacterial disease, a silk-worm disease, in 1870. A year or two later, he proved that anthrax of cattle was caused by a bacillus. Burrill, in 1878, discovered that pear blight was caused by bacteria, the first discovery of a bacterial plant disease. Koch discovered the germ of tuberculosis in 1884. Since that time there has been a continual stream of new and important discoveries in bacteriology of immediate and practical benefit to agriculture.

The fungus diseases of plants have been known and described for one hundred and fifty years. The number has been added to continually until it runs up into the thousands. Many single species of both cultivated and native plants have from fifty to one hundred fungus enemies attacking them. Not until Millardet discovered the efficacy of Bordeaux mixture in the control of the vine mildew in 1883 and published his results in 1885 did we have a satisfactory and direct way of killing these fungus enemies or preventing their attacks on the host plant. A new word, "fungicide," had to be added to the dictionary.

One of the effects of the utilization of the various sciences in agriculture has been to bring to notice the gaps in the sciences. The demands of agriculture, therefore, for new knowledge in science have acted as a powerful stimulus to scientific men to take up many problems which might otherwise pass unnoticed. In this way agriculture has greatly stimulated certain lines of research, such as many problems in chemistry, including physiological chemistry, and many branches of botanical and zoological science, particularly in pathological and bacteriological lines. Agriculture, therefore, has not only drawn heavily on scientific results, but has in turn enormously stimulated intellectual activity in these lines. In a much more direct way, however, it has fostered and encouraged scientific research by financing and supporting it. It is safe to say that there is far more scientific work being done during the current year in botany financed by agricultural appropriation bills than all the other research botanical activity combined, whether amateur

or professional. What we need is more real science. That, I think, soon becomes apparent to all engaged in attacking problems of agricultural production.

Chemistry has done great things for agriculture. It has furnished the methods of fertilizing the soil and of securing these fertilizers from the earth,—potash, phosphoric acid, and nitrogen. It has helped us in compounding a balanced complete fertilizer, varying to suit soil conditions and crops. It taught us how to feed a balanced ration to our stock. It provided simple tests by which the farmer can determine the amount of butter fat in any given sample of milk and thus furnished a guide for distinguishing between productive and unproductive animals. Chemistry, combined with plant-breeding methods, has increased the sugar content of sugar beets by furnishing a method for determining the high sugar content of certain specimens to be used for seed production. It furnishes the basis of much agricultural experimentation and assists in nearly all lines of research.

The science of zoölogy has contributed much information of use to agriculture. Perhaps in no way has it been more useful than through the researches on the diseases of domestic animals and the methods of controlling or mitigating these diseases. Many of these diseases are not only contagious to the animals, but are doubly serious because communicable to man. Zoölogical science has furnished the basis for the elaborate system of meat inspection, of dairy inspection, and of quarantine operations. The introduction of the tuberculin test in eliminating tuberculosis from dairy herds may be cited as a fine piece of work. In some animal diseases, such as the foot and mouth disease and swine plague, we are still in the condition of not enough science. In neither of these contagious diseases has the germ or the real cause of contagion been discovered. Mendel's law and the principles of animal breeding worked out scientifically have given an entirely new status to this art. Results can be figured out scientifically by mathematical and biological rules and a prediction made beforehand as to what may be expected from certain crosses.

The science of entomology has been of the utmost utility to farmers in crop production in recent years. Economic entomology may be said to date back for at least two generations. The control of insect pests is perhaps one of the greatest contributions of science

to the farmer. A few striking examples may be used to illustrate the success that has been achieved in this line.

About forty years ago the potato bug or Colorado potato beetle started in to simply eat up or clean up the potato crop of this country. The entomologists readily fixed up a poison to kill him. Paris green, either sprayed or dusted on the potato plants, quickly and effectively solved the problem. The codling moth or apple worm was thought by many to originate spontaneously within the fruit. The entomologists have taught us that it is the larva of a harmless-looking little gray moth. They have worked out the life history of the insect and have given us a spraying routine with arsenical poisons by which practically complete control is maintained. The commercial apple orchardist who follows the rules laid down by the entomologists can now estimate his crop with reasonable certainty as far as this pest is concerned, as soon as the fruit has set in May. The apple buyer can know that he will get reasonably sound fruit throughout the barrel from a sprayed orchard. The good housewife can serve baked apples to her family or guests without the danger of a disgusting and nauseating worm being found when the apples are opened. One can now eat raw apples in the dark. It is safe to say that without a remedy for this one pest alone, commercial apple culture in this country could not possibly exist in anything like its present proportions. Our 86,000,000 barrels of apples in the crop of 1914 could never have been produced or marketed. With this pest controlled, apples are not only shipped to all parts of the country from the apple producing centers, but are sent all over the world. The Hessian fly has been known to destroy half to two-thirds of the wheat crop in the wheat-growing districts. The problem was attacked by the entomologists and the life history of this insect fully worked out, with the result that a practical, satisfactory remedy was developed, the utilization of which entails no additional expense to the farmer. The remedy consists merely in deferring the planting of the wheat until after the emergence and death of the adult flies. The cotton boll-weevil entered this country from Mexico about twelve years ago and its effects were so severe that it threatened the destruction of the entire cotton industry of the United States. Scientific entomologists attacked the problem vigorously and by means of a thorough investigation of the life history and habits of this pest found a way of getting around

it. In the course of this work it was learned that the critical period in the life history of the weevil occurs during the winter. It is very rare that more than three per cent of the weevils in the field in the fall survive to attack the crop the following year. The first step is to greatly reduce this three per cent by the destruction of the remains of the cotton plants in the fall after the crop is harvested. The advantage obtained by this means is followed up by procuring an early type of cotton, planting early, and pushing it to early maturity during the following season. By this means, production has been maintained from 50 per cent under unfavorable conditions to nearly or quite a full crop under favorable conditions.

The science of botany is being utilized in so many different ways in the establishment of new methods in agriculture that to attempt to enumerate even the different lines would not be within the scope of this article. Without minimizing the important results that are being secured through the new methods of plant breeding, including the application of Mendel's law and of other methods of crossing plants based on scientific knowledge, and without attempting to include the many helpful discoveries in plant physiology, it may again be pointed out, as in case of zoölogy, that some of the most marked triumphs have been secured in the control of plant diseases, particularly in case of the fungus and bacterial diseases.

Previous to 1885, the farmer, fruit grower, or gardener was practically at the mercy of the fungus pests on his crops. The losses are still very large. It has been estimated that all plant production in this country is annually reduced from 20 per cent to 25 per cent through plant diseases, and there is considerable foundation for this estimate. When we realize that we are dealing with a crop worth annually between six and seven billion dollars on the farm, the magnitude of this loss is appalling. Only a part of this can, of course, ever be reached and prevented. Many diseases are physiological, produced by the effect of climatic and soil conditions difficult or impossible to change. In the irrigated regions of the West, new types of physiological diseases have caused serious troubles in the orchards of deciduous fruits and in the orange groves. It may take years of careful research to even find out the cause of some of these troubles, and they appear to be difficult to remedy even when the cause is thoroughly known.

On the other hand, the fungus diseases of plants have yielded to research during the last thirty years in a manner that is really marvelous. The black rot of the grape, a native disease on American wild grapevines, attacked our rapidly increasing grape industry in the Eastern United States in the early '80's. The discovery of Bordeaux mixture in France by Millardet, which shows the international character and value of research, opened up new possibilities. The department of agriculture at Washington started experiments in 1886 and within the next four or five years gave to the grape growers a complete and successful routine treatment by spraying through which from 95 per cent to 98 per cent of the crop could be saved. This treatment is the very basis of the grape industry. Without it the vines would bear only ragged and unsightly bunches scarcely fit for shipping to market. The solid, well-filled bunches of smooth, bright berries of our American grapes which are shipped by the thousands of carloads annually can be claimed by plant pathology as one of its triumphs.

In much the same way, by investigating the life history of the fungus parasite, finding out its time and method of infection, and by testing with spraying mixtures, most of the fungus diseases of the apple, pear and peach have been brought under control. Apple scab, bitter-rot, black-rot and leaf-spot, pear scab, fruit spot and leaf-blight are entirely under control by routine spraying methods. The peach, with its serious disease known as brown rot, and the scarcely less serious black spot or scab, for a long time puzzled the plant pathologist, not because the character of the disease was mysterious, but because the available copper and sulphur fungicides were too injurious to the foliage. The problem was completely solved, however, by the discovery of the self-boiled lime-sulphur, which can be sprayed on to the peach without injury and which kills and prevents the fungi. By combining this, as in most spray treatments, with an arsenical insecticide, such as arsenate of lead, a complete spraying routine for the insect pests and fungus diseases of this fine fruit is now available. This benefits not only the peach grower, but every one interested in the peach business and the consumer as well. The sprayed trees yield a far better and more reliable crop, of higher grade, more perfect fruit, to the peach grower. The peaches handle and ship better in the refrigerator cars and are more satisfactory for the wholesaler and jobber. The retailer finds

that the sprayed peaches stand up and keep in condition for a longer time while he is selling them, instead of rotting on his hands and proving a disappointment, and the consumer ultimately gets more luscious peaches to eat.

Production of potatoes, cantaloupes, celery, and even tomatoes has been greatly helped through spraying methods devised against the fungus pests of these vegetable crops, and through other methods of control worked out through scientific research.

There is a family of parasitic fungi that attacks many species of plants, producing dark, powdery masses of spores in such abundance that they are called the smuts. The various species of this family attack a great variety of plants, but several species attack our great cereal crops. They produce a smut of Indian corn and the cereal smuts. One botanist has estimated that the annual losses from the corn and cereal smuts in this country exceed, in amount, all the taxes that are collected, both state and national. For most of these smuts the science of plant pathology has furnished a complete and satisfactory routine treatment, which is applied at a very small cost. It consists in disinfecting the seeds. In most cases it consists in sprinkling a little formaldehyde water over the seeds and covering them with sacks for a few hours. In one case, not controllable by chemical disinfection, namely, the loose smut of wheat, the remedy consists in dipping the seed for thirty minutes in hot water at 130 degrees F., hot enough to kill the fungus but not to kill the seed. A somewhat similar method, namely, dipping in formaldehyde water, has been found to be the remedy for potato scab and for a number of other potato diseases.

The control of plant diseases, however, is by no means limited to spraying with fungicides or to disinfecting the seeds, tubers, cuttings, etc., by chemicals and otherwise. Many diseases are controlled only by eradication methods. In case of the contagious peach yellows, the entire tree has to be pulled up, as soon as it is stricken, for the benefit of the rest of the orchard, and the community. In case of pear blight and apple cankers a thorough local eradication of the diseased spot is necessary, but not the destruction of the rest of the tree. In this disease, which is bacterial in its nature, the most important feature of the control method consists in finding and eradicating the cases of hold-over blight, where the germs live over winter to attack the trees the following spring.

In 1905, pear blight threatened to destroy the entire California pear industry. During the five years preceding it had destroyed about one-third of all the pear plantings in the state. The application of these methods, with, however, only a moderate degree of thoroughness, resulted in saving the greater part of the industry from destruction. California still ships her canned Bartlett pears all over the world.

Many of our worst and most destructive plant diseases have been imported from the old world. Some, like the chestnut bark disease and the citrus canker, are very recent importations. Plant pathologists have discussed, for several years, the advantages of supervision over plant importations. Formerly we have had no law by which plant diseases could be excluded from entry. After some conspicuous cases of recent occurrence, Congress passed the federal quarantine act. This provides for a board of scientists, known as the federal quarantine board, and gives the secretary of agriculture very wide authority in excluding, not only plant pests, but the importation of any plants or seeds, etc., which may be considered dangerous. We are now trying to shut out, from this country, several potato diseases from Europe. We are endeavoring to prevent further entrance of citrus diseases, by excluding the importation of citrus nursery stock. We are trying to keep out further importations of the European white-pine blister rust which threatens our white-pine forests with destruction. Whatever good may come from this work goes back primarily to scientific research on plant diseases.

In discussing the triumphs of plant pathology I ought not overlook some of the difficulties and failures. Quite a number of bacterial diseases of plants have been discovered, but in only a few cases are the remedies or methods of control well worked out or entirely satisfactory. The root diseases of plants are either little known, or, if known, little has been accomplished in the way of their practical control. In many of these difficult problems in plant pathology, investigators have turned to a different method of attack, namely, the breeding and selection of resistant varieties. In some cases, as in the cotton wilt of our southern states, signal success has been obtained. I should not, however, convey the idea that all plant diseases have been brought under control. Many problems, like the crown gall of fruit and other trees, the root rots,

the new citrus canker, the chestnut bark disease, and numerous others, still attack vegetation unchecked, or only partly controlled, or, in case of the citrus canker, controlled by heroic methods, such as burning up the entire tree when only a single leaf is affected.

I have mentioned earlier in this paper chemical investigations of the soil. At first, that was thought to be the important problem in soil studies. Later it was shown that the physical properties of the soil were as important, or possibly more important, than its chemical composition. Still later, within the last twenty years, it has been realized by investigators that the biological properties of the soil are even more important than either its chemical or its physical properties. The soil under our feet is teeming with bacteria, with fungi, with algae and with microscopic animal life, chiefly nematodes. The species of the latter alone run up into the thousands. This branch of science has only been entered upon. It may be scarcely said to have been exploited at all. It is no exaggeration to say that a cubic foot of ordinary garden soil presents more unsolved problems in biology than the entire solved problems up to the present time and these problems are more difficult than the building of the Panama Canal, including both its engineering and biological achievements—more difficult than wireless telegraphy, than submarine or aerial navigation, for these latter have in part been solved. If we may judge the future from the past, while great things may be expected from soil bacteriology and soil biology during the next hundred years, at the end of that period new problems just as important will be clamoring for solution. One strikingly important thing has already been brought out in soil bacteriology. In this case the discoveries are partly linked with plant physiological discoveries. I refer to the nitrogen assimilating organisms in the root tubercles of the leguminosae. It has been known for over a hundred years that clovers and some similarly related plants possess a remarkable power in renewing soil fertility when these plants are plowed under for the growing of subsequent crops. It was finally discovered that this property depended on the presence of minute tubers or tubercles that occur abundantly on the roots and that the real function was performed by a tiny bacillus which lives in these tubercles. The clover plant easily furnishes the sugar as the necessary food for the bacteria. The bacteria living in the tubercles are able to force the free nitrogen of the air into

chemical combination and build up nitrates subsequently readily converted into proteids, the most valuable food of both plants and animals.

Still later investigations have developed practical methods of artificially cultivating and distributing these germs for soil inoculation. A field which had never grown alfalfa cannot ordinarily be successfully planted to this crop. When soil is supplied with the proper strain of the root tubercle bacillus, alfalfa can be at once successfully grown. In actual practice the germs from liquid cultures are mixed with a little partly dried soil and this is sown over the surface and immediately harrowed in. In some cases the alfalfa, or other leguminous seeds, may be coated with the culture. In introducing a new leguminous crop, like alfalfa in most sections of the eastern states, soy beans from Japan, hairy vetch and other special crops of the pea, bean and clover family, this process gives us at once command of the situation. It explains the cause of many failures in the past.

The results of the new discoveries and the continual introduction of new methods have been to place agricultural experimentation on a much higher plane. It has become more and more necessary for the worker engaged in strictly agricultural research to have at least sufficient knowledge of the sciences to draw into his service all their available data. Agricultural research is giving more and more opportunity for the use of the highest brains and intellect. More than this, the farmer, himself, instead of leading a life of drudgery or carrying out a few simple routine processes, finds himself engaged in an intellectual occupation. This is particularly true of fruit and truck farming and the growing of special crops but the principle pervades all farming. We hear much these days about the agricultural uplift that is now going on, and the various influences that are bringing it about. I feel sure that a careful analysis will show that the biggest single factor which is producing this uplift, and the greatest hope for the future of this movement, is the application of science to the problems of crop production.

AGRICULTURAL EDUCATION AND AGRICULTURAL PROSPERITY

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American agriculture is just emerging from the pioneer stage. As long as there was an abundance of free land over which grazing and grain growing were rapidly and extensively spreading, so much livestock and foodstuffs were cheaply produced by the simplest methods that their prices were so low that the farmer had no incentive to seek special training for himself or his sons or to encourage his children to remain on the farm. It is true that inventive genius came to the farmer's aid and provided him with machinery for this extensive agriculture, by which the cost of producing staple crops per bushel or other unit of measure was very greatly reduced. Thus the American farm worker became more efficient than the farm worker of the older countries in the sense that he was able to secure the largest average production per man, though his production per acre was relatively low.

With free land so reduced in amount and availability that its utilization has practically ceased to have any influence on our agricultural production, the economic conditions of our agriculture have materially changed. Production is no longer running so far ahead of demand that our markets are glutted with agricultural products. For this reason alone there would have been a considerable advance in price of these products in recent years. But there have been many causes for their rising prices. When free land was practically exhausted, the price of farm lands began to rise and our last census showed a remarkable advance in farm values. The rapid wearing out of the great ranges for domestic animals, the reduction of yield per acre in the prairie states under a single crop system, the widespread need of fertilizers, the increasing cost of bringing new land into cultivation by clearing, drainage or irrigation, the absolute necessity for more careful and complicated systems of culture and cropping are among the important matters directly relating to agricultural practice which are now affecting

the prices of our farm products. To these must be added the economic and social influences which have caused the advance of prices generally at home and abroad. A complicated and expensive system of distribution has forced the ultimate consumer to pay high prices for his foodstuffs. The great rise in the wages of laborers employed in towns has made farm labor scarce and more expensive. The general rise in the standard of living has brought with it the practical necessity for a greater variety of expenditures on the farm, and among other things is the burden of expensive sanitary regulations. The changes in systems of farming in different regions brought about by the spread of agriculture westward and the growth of industrial population in farming regions have necessitated various new expenses. The transfer of agricultural and home industries, such as butter and cheese making, from the farm to the factory and the consequent narrowing of the sources of farm income must also be considered.

Meanwhile the steady shifting of political and business affairs from an individualistic to a socialistic basis has profoundly affected the status of the farmer. Everybody else has been constantly making wider and wider combinations. The farmer has thus far very largely stood alone, though more and more he has been compelled to deal with organizations rather than with competing individuals. Blindly clinging to the old ideals of life, he has been put at an increasing disadvantage relatively as regards his place in the world. For a time the simple life and freedom of the pioneer seemed to him to overbalance all the advantages of urban life. But now the restraints of modern civilization are becoming more clearly apparent and he begins to realize that other classes have passed him in the race. The natural effect of such an awakening is to create a profound dissatisfaction with country life and an effort to escape from it at the earliest favorable opportunity. If he overcomes this temptation and retains faith in the possibility of an elevating and satisfactory life in the open country he becomes an active advocate of measures for the improvement of the economic and social conditions of the farm.

Fortunately in recent years some of the best things in modern civilization have come much closer to the farmer. The telephone, trolley car, railroad, automobile, rural free delivery of mail, and the parcel post have to a considerable extent destroyed the isola-

tion of the farmer and made possible an enlargement and enrichment of his business and social life. They have brought him much information about the changes that are going on in the world and his need of a broader horizon of knowledge and experience. He sees now, as never before, that if he is to be a man among men in the modern world he must have a broader general education and if he is to be highly successful in the practice and business of agriculture on high-priced land with high-priced labor and with the multifarious expenses of the well-equipped farm and home he must have some definite technical education along agricultural lines.

Therefore, while there are many other things which will be required to put our agricultural communities in satisfactory condition, the fundamental need is a better system of education. This means in the first place a radical reorganization and redirecting of the rural common schools. As agriculture spread out over our vast territories the school teacher went with the farmer over a part of the field but in some large regions was almost wholly absent. Hence great bodies of our farming people have been wholly or nearly illiterate. The campaign against illiteracy, which has gone on with increasing ardor and success for a century, but which has not yet entirely covered the ground, has been waged on the theory that we must have as many schools as possible. Hence for a long time school districts were greatly multiplied in the effort to bring the schoolhouse within the walking capacity of the smallest pupil. In many regions this multiplication of school districts was accompanied by what was considered the essential principle of absolutely local control of the school. Thus the number of petty school officials was indefinitely increased and each school was largely a law unto itself.

Meanwhile the urban communities were using their increasing wealth in building up a strong and highly developed school system and taking into their employ practically all the trained teachers. The country schools therefore while not altogether fulfilling their primary purpose of abolishing illiteracy have relatively fallen far behind the city schools in their range and efficiency. Moreover the subject matter of their curriculum and the methods and attitude of their teachers have been mere imitations of the city schools. Thus as far as the country schools have had any definite influence on their pupils it has been to make them dissatisfied with country life and lead them away from the farm.

While in recent years there have been widespread efforts to remedy the defects of the rural schools, the great educational problem of our day still is to devise a way of equalizing the educational opportunities of country and city children. It is now obvious that this cannot be done on the principle of local control and financial support. Nothing less than state control and the use of state and national funds for the education of all the people will ever give the country children elementary, secondary and higher education in the same way and to the same extent that under our present school system it is provided for city children.

Our educational situation is only a very fundamental and universal example of what is true with reference to the whole country life problem. This can never be solved by the farmers alone. It is a task for our whole people. Sentimental reasons alone will not keep any large body of people in the open country. If the child born on an American farm finds out as he grows up that he cannot get a satisfactory education, have a good chance to own property or live an interesting life in the country, why should he stay there?

The American farmer or farm laborer is not a serf or peasant attached to the land. He is free to move about or change his occupation like all other Americans. He surely does not exist simply to produce cheap foodstuffs or clothing for city people. If he stays in the country it must be because he is convinced that considering his ability and tastes he can personally get the most out of life there. Therefore if city people really feel that they must have a certain number of farmers to support their life and make good business conditions it is absolutely essential under conditions existing in a free democratic nation that they shall contribute their part toward making the home, business and community life of the country people satisfactory to those people.

The manufacturers, bankers, merchants, railroad men, and professional workers can each contribute to this end in various ways. But in any case a fundamental thing is a good system of education for country people.

Present-day pedagogy holds that every child should be trained with definite relation to his physical environment and the common arts on which material civilization depends. What may be called the industrial element should therefore be a part of every system of public education, apart from more strictly vocational training.

This has already led to the widespread introduction of nature study, gardening, cooking and sewing into elementary schools, and natural science, agriculture, wood and metal working and home economics into high schools. Thus far such instruction has chiefly reached children in urban communities. It should be given to the masses of our children in both city and country.

But such general industrial training is not sufficient to fit boys and girls for vocations. There must therefore be added courses and schools for definite vocational training, including both secondary and higher schools. This is being done more and more for mechanic arts, engineering and agriculture.

Public interest in the development of technical and vocational education in this country is rapidly growing. It therefore seems appropriate to include in this article a brief survey of the history and present status of agricultural education.

The American system of agricultural education has been developing for over fifty years, and has been of great service to thousands of farmers but has not yet affected the great mass of them.

Aside from a few scattering efforts at elementary education in agriculture, the first broad movement in that direction was in the establishment of agricultural colleges, begun by the states and nationalized by the Land Grant Act of 1862. At the end of twenty-five years the land grant colleges had become well established in most of the states but their agricultural departments were relatively weak and attracted comparatively few students. This was partly because the agricultural practice required at that time was so crude, but partly because there was so little definite knowledge to teach.

Then came the establishment of research departments mainly in the agricultural divisions of these colleges, under the title of agricultural experiment stations. These stations, also, were begun by the states and nationalized by the Hatch Act of 1887. In about ten years after their establishment they had collected through their own investigations and through the reports of similar institutions abroad a sufficient body of knowledge to enable the agricultural colleges to formulate and undertake effective courses of study in various branches of agriculture. Then students began to increase in number and quality and these colleges entered on a prosperous career.

From the colleges also emanated the beginning of a system of

extension work in agriculture for the benefit of the farmers at their homes. This was done through the free distribution of station bulletins and the holding of local farmers' meetings usually designated "farmers' institutes."

Alongside the colleges and in increasing measure in coöperation with them were developed the United States department of agriculture as a research and extension agency, and the state departments or boards of agriculture, performing to a certain extent similar functions.

In the earlier days much of the instruction in agriculture at the colleges was quite elementary. As the number of students increased the requirements for admission to the regular college courses were raised, there was more specialization of instruction and real college courses in agriculture were developed. To meet the growing demand for the more elementary instruction, short courses not leading to a degree were offered and finally secondary schools of agriculture were definitely organized at some of the colleges to supplement their college courses.

These provisions for secondary courses in agriculture did not long satisfy the people interested in agricultural education. Separate agricultural schools began to be established, courses in agriculture were added to the curriculum of ordinary high schools, and efforts were made to have instruction in subjects definitely related to agriculture introduced into the rural elementary schools. This elementary instruction often took the form of nature study and school gardening, but as time went on an increasing amount of instruction definitely relating to agriculture was developed.

For many years the research and teaching along agricultural lines in all classes of institutions giving attention to these subjects dealt almost exclusively with problems of agricultural production. Within the past decade the vital importance of educational work in rural engineering and rural economics and sociology has so impressed itself on our agricultural leaders that investigations and courses of instruction along these lines have been rapidly developed and enlarged.

The necessity for better training of our agricultural teachers and investigators has also become very apparent. The normal schools have undertaken to do this for elementary teachers. Congress has specifically authorized the agricultural colleges to use a

portion of their federal grants for this purpose. These colleges are quite generally establishing departments of agricultural education. Graduate courses in agriculture are now offered in many of the agricultural colleges. A short-term graduate school of agriculture is held biennially under the auspices of the Association of American Agricultural Colleges and Experiment Stations with a view to stimulating greater interest in the thorough training of agricultural experts. This association is also giving systematic attention to the improvement of agricultural teaching through its standing committee on agricultural instruction which makes an annual report on this subject that is printed and widely distributed. The National Education Association has a section which is giving regular attention to this subject. A National Association of Agricultural Teaching has also been organized. The United States bureau of education and the department of agriculture are employing specialists in agricultural education who are studying this matter throughout the United States and abroad and are issuing bulletins on the pedagogical problems involved in this work and publications containing subject matter organized with special reference to the requirements of the schools along this line.

As already indicated, extension work in agriculture has been going on throughout the country for many years but within the past twelve years has had a very interesting development. When the Mexican cotton weevil began to spread over Texas and it seemed clear that it would extend its ravages to other portions of the cotton belt urgent appeals for help came to the United States department of agriculture. Among the agencies employed by the department to meet this situation was the establishment of a community demonstration farm at Jewett, Texas, under the direction of Dr. Seaman A. Knapp to show "how cotton could be raised despite the boll weevil." This enterprise was successful and similar demonstrations were carried on in other places and extended to other crops with a view to aiding diversification of agriculture in the South. Congress made special appropriations for this work in territory likely to be affected by the boll weevil. The General Education Board, endowed by Mr. Rockefeller, became interested in Dr. Knapp's operations and entered into coöperative agreement with the department, under which large sums from their fund were used for demonstration work in the southern states outside the cotton belt. The states,

counties, local associations and individuals were also encouraged to contribute to this work and their financial support came to be a large factor in the enterprise. The scope of the work, especially along educational lines, was gradually extended to include many matters relating to the economic and social conditions of the farmers and their families, as well as the rural communities in general.

As the work grew it was found desirable to locate agents in the several counties, who should arrange for and supervise the farm demonstrations, hold meetings of farmers at the demonstration fields or elsewhere, visit the farmers at their homes, give out information through the local press, secure for the farmers the publications of the national and state departments of agriculture and the state agricultural colleges and experiment stations, and in general give them and their families advice and assistance along the lines of agriculture and home economics. Existing farmers' organizations were utilized as mediums for the work of the county agents and where such organizations were not available groups of farmers were formed for this purpose.

The importance of interesting the girls and women on the farms was also recognized. Canning clubs were organized among the girls. The members were encouraged to raise tomatoes or other vegetables, were taught how to can the product and were aided in selling the canned goods. At meetings of the clubs not only the matters relating to their work were discussed but also many subjects relating directly to the work of the household. Naturally the women often became interested in the work of the club girls, they were invited to hold their meetings at farm homes, and the women in charge of the clubs were made welcome in such homes. Thus the way was opened to do work for the benefit of the farm women themselves.

The wide success of this demonstration work in the South naturally led to an effort to have similar work carried on in the northern and western states. The office of farm management of the bureau of plant industry therefore undertook work of this character in the North.

Meanwhile the agricultural colleges in various parts of the country had increased the variety and amount of their extension work in agriculture. Special features of this new work were movable schools and the running of railroad trains which carried agricultural exhibits and lecturers who explained them at numerous

stations along the route. The colleges were also drawn into closer coöperation with the demonstration work of the department of agriculture. They formed a special extension section in their national association and undertook to secure from the federal government financial aid for their extension enterprises.

The final result of this effort was the passage of the Smith-Lever Extension Act of May 8, 1914. This provides an annual appropriation of \$10,000 to each state to be used by its agricultural college in extension work in agriculture and home economics. The second year an additional amount of \$600,000 may be allotted to the states on the basis of their rural population provided they contribute an equal amount from sources within the states. This additional amount is thereafter to be increased on the same terms by \$500,000 annually for seven years, after which \$4,100,000 will annually be available for like distribution to the states. If the states fully meet those conditions there will ultimately be an annual fund of \$8,680,000 for the extension work of the colleges. This money is to be spent in accordance with plans made by the colleges and approved by the secretary of agriculture, who is charged with the general supervision of these funds and the administration of the law. The act also provides that this extension work "shall be carried on in coöperation with the United States department of agriculture."

On the passage of this act the secretary of agriculture decided to bring all the extension work of the department into coöperation with the state agricultural colleges in order that thus there might be a unified system for such work throughout the United States. For this purpose "a general memorandum of understanding" was drawn up and signed by the secretary of agriculture and the presidents of the colleges. This provides that the college shall bring all its extension work in agriculture and home economics into a single division with an administrative head and that the department will make a similar arrangement within itself and will then carry on all its extension work in any state which has entered into this agreement through the extension division of the college.

At present this business of the department is carried on by a states relations committee, but in the appropriation act which goes into effect July 1, 1915, Congress has made provision for a states relations service, which will represent the secretary of agriculture

in all his relations with the agricultural colleges and experiment stations. This service will include the present office of experiment stations and offices of extension work, agricultural instruction, and home economics.

The present status of the system of agricultural education being developed in the United States, exclusive of Alaska and the island territories, may be briefly summed up as follows:

Researches covering practically all branches of agriculture and country life are being carried on by the United States department of agriculture and agricultural experiment stations in all the states. These investigations have thus far been chiefly along the lines of agricultural production but are now being rapidly extended into the field of rural economics and sociology.

Graduate instruction in agriculture is given at a considerable number of the state universities and agricultural colleges and through a national summer school of agriculture.

Collegiate instruction in agriculture is given in state agricultural colleges in all the states and by a number of private colleges. In 1914 there were 16,446 students in the regular college courses in agriculture.

Secondary instruction in agriculture is given in short courses and schools organized in the agricultural colleges, in 124 separate agricultural high schools, in 469 public high schools receiving state aid for this purpose, and in a considerable number of other high schools.

Elementary instruction in agriculture in the rural schools is required by law in thirty states and is encouraged by the departments of education in practically all the states. Such instruction is also given in a considerable number of private schools. Nature study, school gardening, and some instruction directly relating to agriculture is given in many city schools. Owing to lack of trained teachers and the poor organization and equipment of the rural schools, effective instruction in agriculture is as yet given in only a relatively small number of these schools.

Many of the normal schools have undertaken the training of teachers in elementary agriculture and home economics but not a sufficient number of their graduates have gone into the ordinary rural schools to affect the teaching there in any large way. The agricultural colleges have in recent years aided in the training of

rural teachers through summer schools. They have also established departments of agricultural education for the professional training of high school and college teachers of agriculture. There is still, however, a great lack of well-trained teachers in all grades of agricultural schools.

A comprehensive system of extension work in agriculture and home economics is now being spread over the United States under the supervision of the state agricultural colleges and the United States department of agriculture and with the coöperation of the state departments of agriculture and education, rural school officers and teachers and organizations of farmers and business men. County agricultural extension agents are now at work in over 1,000 counties distributed through all the states and those agents are assisted by a large force of experts in the various branches of agriculture and home economics sent out by the state colleges and the United States department of agriculture.

While the control of the American system of agricultural education, like other forms of education, has been vested in the states and local authorities, the federal government has contributed in important ways to its development. The bureau of education of the department of the interior has supervision of the federal funds granted to the land-grant institutions, of which the agricultural colleges are a part. In recent years the bureau has also studied the special problems of agricultural education and disseminated considerable useful information on this subject.

The department of agriculture, through its office of experiment stations, has broadly studied problems regarding the organization and work of institutions for agricultural education and with the coöperation of the other bureaus has published considerable material on the subject matter of agricultural instruction. It has also supervised the federal funds granted to the agricultural experiment stations, published a comprehensive review journal of the world's literature of agricultural science and aided the stations in many other ways. And now the newly created states relations service will administer the funds granted to the colleges under the Smith-Lever Extension Act, will carry on a large amount of extension work in coöperation with the colleges and will aid materially in the development of a great system of extension work in agriculture and home economics throughout the United States.

Our system of agricultural education has been further coordinated and nationalized through the Association of American Agricultural Colleges and Experiment Stations. This body works through delegates from the state colleges, the bureau of education and department of agriculture, who hold annual conventions and publish proceedings. There are also standing committees on graduate study, instruction in agriculture, college, station and extension policy and organization, which work between the conventions and prepare reports for the proceedings. There are also joint committees of the department of agriculture and the association on their mutual relations and projects, and a joint board of editors for the publication of the *Journal of Agricultural Research*.

This brief summary of the American system of agricultural education is perhaps sufficient to show that it is broadly planned to cover all the technical and practical phases of agricultural practice, the relations of the farmer to the business world, and the organization and life of rural communities. When carried to completion it will provide definite vocational training for our agricultural experts, teachers, and the great mass of our farmers.

But it will do much more than this. It will be, and is already to a considerable extent, the foundation and inspiration of a great intellectual awakening among the agricultural people. It aims to change their viewpoint from the past to the future, to bring them into touch with all the progressive and uplifting influences of the modern world and to broaden immensely their outlook on business and social affairs. If it can do this in a broad way and thus make the great mass of people living in the open country intelligent and progressive it will be one of the largest factors in establishing the perpetuity of our democratic institutions.

In the present stage of the development of the American system of agricultural education, special stress should be laid on the following things:

- (1) The provision of suitable means for the scientific and practical training of teachers of agriculture and home economics for the elementary and secondary schools and of the county agents and other extension workers.

- (2) Adequate supervision of the teaching of agriculture and home economics in the rural elementary and secondary schools by trained experts connected with the state departments of education who thoroughly understand the problems of country life.

(3) The encouragement of the consolidation and grading of rural elementary schools with a view to the more efficient organization and equipment of practical instruction in agriculture and home economics, as well as their general improvement as educational agencies. Elementary instruction in agriculture and home economics should be given chiefly through practical exercises in gardens or work rooms connected with the schools, supplemented by projects carried on at the home farm or house and supervised by the teacher. This requires better teachers and more equipment than the ordinary rural schools have at present. It is expected that the club work which the extension agents are developing and which should be closely linked with the rural schools will greatly aid in making the instruction in these schools more practical.

(4) The use of state funds to aid in the establishment of high schools in rural regions, in which agriculture and home economics shall be taught by teachers trained along these lines, or the introduction of efficient courses in these subjects in town high schools frequented by country boys and girls. Every child should have at least free tuition in a high school located somewhere near his home. We shall find it necessary to rely chiefly on the high schools for most of the instruction in agriculture and home economics which the farm children will receive.

On its material side this system of agricultural education will undoubtedly do much toward making farming more profitable. It will also greatly increase agricultural production. The wide application of the knowledge acquired by our agricultural institutions would easily double the average yield of our staple crops on lands suited to their culture. This has been demonstrated by the field tests of the experiment stations, by the results obtained by the corn club boys in the South, and by the actual yields in such European countries as France, Belgium and Germany, where economic conditions have promoted intensive cultivation and scientific methods have been widely applied. In addition to this the utilization of vast areas of arable land in our southern states now wholly or largely neglected, the reclamation of the 70,000,000 acres of swamp and wet lands which can be drained, and the irrigation of many millions of acres of the now arid lands of the West will eventually swell our agricultural production to aggregate amounts far beyond

those of today. There is therefore good reason to believe that the American farmers will continue indefinitely to produce an abundant food supply for our increasing population.

Whether the consumers in our cities will be able to obtain food at reasonable prices, after the farmer has received a fair reward for his labor and capital, will depend on the world's food supply and on the cost of distribution after the food leaves the farm.

THE EFFICIENCY MOVEMENT IN ITS RELATION TO AGRICULTURE

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BRANCHES OF AGRICULTURAL SCIENCE

During the past century dozens of new sciences have sprung up in connection with agriculture, but these can be grouped into three general classes.

First we have the technique of production, involving many recently developed sciences, such as agronomy, soils, plant physiology, genetics, animal husbandry, dairy husbandry, technical dairying, etc. The large number of new sciences in this phase of agriculture is indicative of the enormous amount of money and time that has been given to this phase of our fundamental industry.

The second general branch of agriculture relates to the economics of production. This branch of science is generally termed farm management. It is very new and as yet poorly developed, though considerable progress has been made within the last decade in the discovery and application of its principles.

The last general phase of agriculture relates to the distribution of agricultural products from the farm to the consumer. Its various phases are comprehended under the one general term marketing. The importance of this branch of agriculture has always been recognized, but it is only in very recent years that it has been given serious consideration by the agricultural authorities of the country. It is the most complex and most difficult branch of agriculture. Its possibilities are greatly overrated by many enthusiasts and are perhaps not fully understood by any of us.

Take, for instance, a crop like apples. One even hears the remark that there is no such thing as overproduction; the trouble is underconsumption. The apple crop occupies less than 1 per cent of our crop area in this country, and there is probably fifty times as much, more or less, adapted to this crop not now devoted to it; yet at the present time enormously more apples are produced than can

find a market, and the business is temporarily distinctly unprofitable. It is hardly probable that any one would be bold enough to claim that if the marketing of apples could be simplified and the cost reduced to a minimum that this crop, which when prices are good is distinctly profitable, would be in no danger of overproduction. Experience clearly shows that in the case of all those crops that occupy a small acreage but which at times bring a very large income per acre, if anything happens which broadens the market or in any way increases the profit, the room for expansion is so great that in a very short period overproduction is brought about again. If we had the most perfect system of marketing for all perishable products, so that the difference between the price received by the producer and that paid by the consumer became very small, in a few years production would expand until the price received by the farmer would be reduced to its present level, which, on the average for a long series of years, is just about the cost of production. A little familiarity with the history of prices and production of any of these intensive crops will convince anyone of the truth of this statement. But if the cost of distribution be reduced and production expands until the producer is in the same position he now occupies, the consumer would benefit greatly, because he would be getting practically all of the saving from our present wasteful methods of distribution. This makes it highly desirable that systems of marketing be developed that are as efficient as possible. These systems will temporarily benefit the farmer; ultimately, however, the benefit will go entirely to the consumer.

ECONOMICS OF PRODUCTION

Farm Management. The subject of farm management deals with the profits made by the farmer and the various principles involved in making these profits, or the factors which affect profits. The study of this science has shown clearly that any attempt to stimulate production beyond legitimate demand is ruinous to the farmer. It can benefit the public only temporarily, and that at the expense of the farmer. The ideal is to increase production as rapidly as is consistent with profit in production.

There are two factors governing the rate at which increased production has an economic justification. One is increase in demand. This comes about from growth in population, and from the cheapen-

ing of farm products to the consumer, which latter can be accomplished by better systems of marketing. Both of these will permit increase in production without ruinous decrease in price.

The second factor involved is the cost of production. If this can be reduced, then the price at which the farmer can sell with profit will be lowered, and the resulting increased demand will justify increase in production. Perhaps this point may be made clearer by considering its application to other industries. Take coal mining, for example. Suppose that by greater efficiency the annual output of coal were doubled in a short time. Supply would exceed demand, and prices would fall probably far below even the new low level of cost of production. This in turn would automatically reduce production. Approximate equilibrium would ultimately be reached between production and consumption at price levels below those formerly prevailing. Consider also the application of this principle to the great steel plants of the country. If these steel plants were to produce twice their present product, assuming the same kind of competition between steel plants that exists between farmers, the price of manufactured steel would fall. With an increase of 100 per cent in production without a corresponding increase in demand the price would fall to a ruinous point. As a result of these low prices consumption would probably increase, but the price under competition would fall back to the point where the plants would be making only a reasonable profit. This principle applies everywhere where there is free competition and unlimited production. These conditions obtain in agriculture, and anyone who discusses agricultural subjects without taking these conditions into consideration will be led into serious error.

But let us see what service the new science of farm management can render to the farmer and to the public in general. As stated above, this science deals with the economic factors which affect the profits in farming.

Types of Farming. The first and most important of these factors is the type of farming. If a farmer makes a mistake in selecting the various enterprises on which to base the business of his farm, especially if this mistake be a radical one, the resulting effect on his business is so overwhelming that he soon is either driven out of business or compelled to change his type of farming. For this reason in all those sections where agriculture has been long estab-

lished and where economic forces have had ample time to produce their legitimate effect, we find very few serious mistakes in type of farming. Thus, in one of our farm management surveys in a locality near the Atlantic seaboard, where farming has been in progress for more than two centuries, we found only one case of a gross mistake in type of farming. The region is one very poorly adapted to fruit. This particular farmer had planted two-thirds of his land in apple trees. He lacked \$750 of having enough to pay interest on his investment, and as the interest on investment was less than this he actually had an income too small to pay his running expenses. It is inevitable that this farmer must ultimately fail.

But in the West and in certain sections of the South, where agriculture is developing on land recently brought under cultivation, mistakes of this kind are frequently met. A very large proportion of the real estate promotion schemes on the irrigated lands in the West have been based on the utterly false assumption that merely because the climate and soil were adapted to fruits and vegetables, the most intensive kinds of farming, it was possible for all this land to be devoted to this intensive farming. As a result of this egregious error thousands of men have lost their savings by undertaking types of farming utterly unadapted to local economic conditions. That is, there were no markets for their products. Combined with this mistake, and in reality as a result of it, the area of the farms has been made in many cases entirely too small to permit success with types of farming that are adapted to local economic conditions. Not only that, but the prices these men have paid to real estate speculators for their land are such that no type of farming can be made continuously profitable upon the land.

Even in the older parts of the country the science of farm management can render farmers an important service in connection with their types of farming. Thus, in a given region, where a farm management survey was conducted, three-fourths of the farms are dairy farms. Most of the remainder are hay farms. A few instances were found where the major source of income is poultry, or potatoes, or wheat, or several of these enterprises. A careful analysis of the business of some five hundred farms in this locality shows plainly that certain types of farming which are found on a few farms are quite poorly adapted to the region. When the results of this survey are published it will show those farmers who are engaged in

the types of farming most profitable for the region that they are right, and will thus tend to keep them right. It will show those who are engaged in wrong types the change they should make in their system. That is, it will benefit a small number of people by showing them the changes they should make in their types of farming and it will benefit a larger number by showing them that they are on the right road and should stay there.

Magnitude of the Farm Business. One of the most important lessons that the study of the science of farm management has emphasized is the relation between the magnitude of the farm business and the profit made by the farmer. The "little farm well tilled" has been lauded in this country since agriculture first became established. The farms in the Atlantic coast states were established at a time when the family farm was necessarily small because of the lack of labor-saving implements. The owners of these small farms produced nearly everything they needed in the way of food and clothing. They naturally produced a very small surplus, which went to feed the cities. Under these conditions only a small proportion of the population could live in cities because the surplus of farm products over and above the needs of farm families was so small. But about the time when emigration began to flow over the Alleghany Mountains and spread out in the broad Mississippi Valley, covering one of the most extensive and most fertile agricultural regions in the world, improved farm machinery began to be invented. This permitted a farm family to farm a much larger area of land.

The effect of this migration into the Mississippi Valley and the development of more efficient farming with labor-saving implements was overwhelming on the small farms of the Atlantic coast. The period between 1840 and 1850 witnessed the most tremendous revolution in agriculture in the Atlantic coast states that has ever occurred in this country. A small hint of the disaster which overtook eastern farmers during that decade is seen in the following facts. In Chester county, Pennsylvania, which at that time was one of the leading agricultural counties of the country—and which still maintains preëminence as a farming region—the number of swine fell from 65,000 in 1840 to 36,000 in 1850. These small Chester county farms, on which it was not practicable to use the more modern methods of crop production, found themselves poorly prepared to compete in swine production with the large farms of the

West. The disaster to the sheep industry was much more marked, the numbers having fallen during the decade from 56,000 to 13,000. At the beginning of this decade the production of beef was perhaps the most important phase of agriculture in Chester county. In the beginning of the decade there were 39,000 beef cattle in the county. Competition with the West reduced this number rapidly, and the reduction continued until 1890, when only 11,000 head of these cattle remained in the county. Practically the only livestock industry left to these farmers was dairying, and it is a bitter pill to the stockmen whose business has been based upon beef cattle, swine and sheep to descend to the continuous and laborious work of caring for dairy cows and their products. In 1840 there were 16,000 dairy cows in Chester county, Pennsylvania; in 1890 there were 49,000, and dairy products now constitute by far the most important source of income in the county. The small farms in the region could be converted into modern family farms only by some such intensive type of farming as dairying, as they are not adapted to fruit and vegetables.

What has been said above applies practically to the whole North Atlantic coast. Small farms still predominate in that region, but the reasons are at least partly historical, and not wholly economic. In the West, which was settled up after labor-saving machinery had been generally introduced, these small farms are few in number and are gradually disappearing to make place for the more effective large farm. In general, farm management investigations have demonstrated that the smallest effective area for a farm is that which will give constant employment at productive labor to the average farm family. It may be any amount larger than this, provided the farmer himself is capable of managing to advantage a larger amount of labor. In localities where good markets are available for the products of intensive farming, relatively small areas of land may be made to support an intensive business which in actual magnitude is equal to the business of the large farms of the Middle West. But when a real estate promoter undertakes to transplant this intensive farming to small patches of land a thousand miles from any possible market, he is doing a gross injustice to his patrons.

Quality of Business. The third most important factor affecting farm profits relates to the quality or the general efficiency of the

business. First we may consider the yield of crops. Farm management surveys have shown that, on the average, the higher the yield of crops the more profit the farmer makes, though there appears to be a very distinct limit in this direction. If the land is poor and yields are very low, they can be increased markedly with relatively small expenditure. But after yields of medium magnitude have been attained further increase is more expensive, and it not infrequently occurs that farmers with moderate yields make more profit than those who produce much larger yields. In general, however, those who get at least moderate yields nearly always make more profit than those who have low yields. The most important factor in the yield of crops is the character of the soil itself, and the farmer has very little control over this; but tillage and the use of manure and fertilizers are factors which are completely under the farmer's control. He can also increase his yields considerably by careful attention to the kind of seed he plants and by such modifications of his rotation or of his cropping system as will give the best adjustment between the kind of crop and the character of the soil, for distinctly different types of soil frequently have marked differences in crop adaptability.

In the case of a dairy farmer the income per cow is a very important measure of the quality of his business. In one of our farm management surveys a large number of farmers had receipts of less than fifty dollars per head from their cows. When these farmers were grouped according to number of cows, it was found that the more cows the farmer had the smaller were his profits. But in the same region were a considerable number of farmers who received an income of over a hundred dollars per cow, and in this group the larger the herd, the greater the profit. It has been conclusively proved in farm management surveys that one of the most important problems in any dairy region is that of breeding up the herd for greater production.

In the case of those farm products which reach the consumer in the same form they leave the farmer, as is the case with fruits and vegetables, the method of preparing the products for market, the kind of containers, the method of arranging the product in the containers—in fact, all those factors which affect the appearance of the produce when exposed for sale to the consumer,—have a very distinct relation to the farmer's profit.

A very remarkable illustration of this fact occurred a few years ago in St. Louis. At the height of the season for peaches the market was utterly glutted and the price was far below even the amount of transportation charges. One could go along the principal market streets and buy any amount of peaches for ten cents a crate. The owners of a large peach orchard in southern Missouri during this period made a special effort to make their fruit look attractive. The crates they used were made of the cleanest lumber obtainable. Every peach that was not entirely fancy in quality was thrown out, and before packing each peach was wrapped in a clean, crisp paper wrapper, with advertising matter neatly printed on it. When these peaches reached the St. Louis market and were exposed for sale beside other fruit which could be had for almost nothing, purchasers who passed along and saw this fine fruit would ask "How much?" "One dollar and sixty cents a crate," was the merchant's reply, to which the customer would usually respond: "Send me up a crate of these." Purchasers did not even ask the price of the less attractive fruit. They had found what they wanted and were willing to pay the price for it. It is in the most intensive types of farming that this matter of the appearance of the product in the market becomes of supreme importance.

Organization of the Farm Business. It is in the organization of the farm business that the principles which have been so highly developed in connection with the recent efficiency movement in the industrial world have their widest application. Volumes could be written without exhausting the subject of farm organization. Space permits only a few illustrations.

In the heart of the corn belt about fifty per cent of the land is in corn, about twenty-five per cent in oats, fifteen per cent in clover, and the remainder in a miscellaneous assortment of crops. Corn and oats thus occupy seventy-five per cent of the land. Now it happens that both of these crops require their maximum amount of work in early spring. After the spring rush is over oats require no further attention until harvest time, which comes just about the time the corn ought to be cultivated for the last time. Then after the corn cultivation is finished and the oat crop is harvested, there is practically nothing to do on these farms until it comes time to husk corn late in the fall. When the corn is husked, there is a long idle period during the winter.

In order to meet the tremendous rush of work in the early spring it is necessary for the farmer to have about one horse for every twelve to fifteen acres of land he has in cultivation. On a particular farm in Illinois, on which one hundred and seventy-five acres of land were in cultivation, twelve work horses were used for two months in the spring. Outside of these two months there is not a time of the year when more than five horses are needed, and except for about five months two horses would do the entire work on this farm. Now it costs approximately \$100 a year to maintain a horse in that region. But since horses cannot be hired when they are needed, it is necessary for this farmer to keep twelve horses the year round. A careful study of his system resulted in the formulation of a new system which spread his field work quite evenly over the period from early spring till late fall and enabled four horses to do the work without ever being rushed. Assuming that an extra horse is kept for emergencies, this new system represents a saving in feed and other expenses of seven horses, amounting to, say, \$700 a year, with a corresponding saving in horse-drawn implements. This represents approximately the saving that could be made by better farm organization throughout a large area in the central portion of the corn belt.

The problem of farm organization in the cotton belt presents some very interesting phases. Taking the cotton belt as a whole, a single farm family can manage about fifteen acres of cotton and ten acres of corn. One horse can do the work on such a farm. This is the reason for the general prevalence of the one-horse farms in the South. But when a man is following a single six hundred-pound mule across a field he is not earning much for himself or for anyone else. Studies of the problems of farm organization in the South have resulted in evolving systems of farming which will permit the average farm family to produce as much cotton as it now produces and at the same time produce about forty-five acres of other crops, thus raising their family income from about \$140 to over \$500.

It should be remarked that the principal benefit that will come from changes of this kind will not be a great increase in production; it will be a great increase in the income of the farm family, thus permitting a much higher standard of living. This may be said generally of the benefits to be derived from the application of

the principles of farm organization. It is easily seen that if one farm family who now manages twenty-five acres of land can be made to manage efficiently over fifty acres that one-half of the present farm population of the South will be sufficient to farm the present crop area. Increased efficiency in farm organization will thus tend to reduce rural population, but to increase greatly the income of those who remain. This will permit a larger proportion of the population to be employed in city industries. The increase in these industries will in turn broaden the market for farm products and thus justify increased production per acre on the land at present under cultivation, and this increased production must come about mainly in response to increased prices or decreased cost of production.

One of the strangest anomalies which has developed in our studies of farm organization is the fact that so-called accurate farm bookkeeping is exceedingly deceiving. The farmer who undertakes to keep books finds that the books do not tell him the truth, and he quits because he loses confidence in them. This point can be well illustrated in the case of farm poultry.

The office of farm management has, in some cases, kept an accurate record of all the labor, feed, supplies, etc., expended in maintaining a flock of poultry on the farm. In nearly all cases the results show that the poultry products have cost more than the farmer received for them. In one case a very efficient farmer in one of the North Central States, who maintained a large flock of poultry, found from an accurate record that the eggs during a certain year cost him twenty-five cents a dozen while the average selling price was twenty-two cents. The farmer did not know how to find where the trouble lay, but he did know that there was something wrong with the bookkeeping. When the results were shown him he remarked: "Well, I know I made these records accurately, and these eggs have cost me more than I got for them; but I couldn't buy eggs of the quality of those we have consumed on the farm this past year. I shall continue to keep my poultry." The trouble with the bookkeeping was this: this flock of poultry had been charged with about three hundred hours of labor at fifteen cents an hour. They had been charged with certain materials used in the construction of houses and runs and with the time consumed in putting these materials in place. They had been charged market prices for all

their feed, and so on. Now the fact is that nearly every hour of time spent on this poultry was time that would otherwise not have been profitably employed. Most of the material used in constructing and repairing the quarters was waste material lying about the place. A large part of the feed was material that, if the chickens had not been there, would have gone to waste. The fact is, this farmer made a profit out of his poultry, and the books did not represent the facts in the case.

It is even possible for a farmer to make a fair income when every industry on his farm, if considered separately by the usual methods of bookkeeping, would show a loss. Take the dairy farmers of New England, for instance. When we keep books against the average herd of dairy cows they show a loss, because we count the time put upon them at current rates of wages. But the fact is that many farmers, if they didn't have these cows, would spend most of the time for six months in the year with their feet against a hot stove. But with the cows to look after they can make enough above the actual cash expenditure to pay themselves, say seventy-five cents a day, all through this winter period. This represents just so much added to the farmer's income, and this industry, which the ordinary methods of bookkeeping show to be a losing one, is actually the foundation of the farmer's success, though it must be admitted that under such circumstances his success is rather meager.

It is impossible to approximate the annual saving to farmers in this country that would follow the adoption of ideal systems of organization for their farm business, for two reasons: in the first place, we do not know the facts concerning present conditions except for a few limited regions where farm management surveys have been conducted; and in the second place, such reorganization would require considerable change in the relative area of crops and in the numbers and types of farm animals, and no one can predict what the results of such changes would be. It is safe to say, however, that establishing suitable types of farming everywhere, making every farm either large enough or intensive enough (where permissible) to furnish full employment to its owner and the working members of his family, securing the largest yields consistent with profit, and introducing such organization of the farm business as to give the maximum utilization of the land, labor, and equipment of

the farmer, would have a most profound influence, not only on the standard of living on American farms, but on the supply of labor for other industries. The above-mentioned example of more than doubled output and income for a southern farm family is exceedingly suggestive.

THE SCIENTIFIC STUDY OF MARKETING

BY SELDEN O. MARTIN,

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The words "scientific" and "principles" are much heard in business today, in its practice and especially in its teaching. Some years ago it might have been proper to discuss the possibility of teaching business and the existence of principles in business. Time has answered both queries. Business is being taught and principles of business are being disclosed.

Business principles are sometimes confused with business saws. "Early to bed and early to rise" and "Save your pennies," or even "Goods well bought are half sold" could by no stretch of the imagination be called business principles in the scientific sense of the word principle. Scientific connotes a basis of organized knowledge, and principle connotes at least a fairly definite relation between antecedents and results. On the other hand, such generalizations as—the nearer an inventory is to its raw material stage the better basis of credit it is, or, when stock-turns are fewer depreciation cost is apt to be greater,—are nearer our understanding of principles.

When enough precedents of marketing are accumulated to show that with some facts ascertained as to whether an article is a specialty or a staple, what its unit of sale is, what its capacity for repeat orders is, and so on, certain broad policies as to the methods of marketing this article can be laid down, then certainly an approach is being made to an organized body of knowledge. And if it is possible to go still further in the field of marketing and in the division known as retailing, show by inductive study that one of the first rough tests of efficiency in a retail store is the annual sales of the average salesperson and still further establish that at present in the retail shoe business in a city of more than 100,000 population this annual average should be about \$10,000 and furthermore that the rent should not exceed 5 per cent and can be reduced to at least 3 per cent of the net sales, then indeed there is being provided a still more definite body of knowledge from which principles can be established.

The two great divisions of business are the making of things and the buying and selling of things. These are the central activities—production and marketing. The other functions of business, for example, accounting, banking, transportation, insurance, are functions auxiliary to these central activities—important, most important, but auxiliary.

In the field of production, of course, the body of knowledge is on the whole better organized and more precise. The various systems of management relate more to production than to marketing. Though a vast field for research, marketing has had comparatively little scientific study. It has not seemed particularly susceptible to scientific study. It abounds in the human equation. This does not mean that much ability has not been expended on this field not only in studying and inciting demand but also in recording performance. Map and tack systems, quotas and bonuses, selling costs and carefully prepared statistics of various kinds have for a considerable period been employed by the most progressive selling organizations. These internal statistics have also been accompanied by external statistics affecting and reflecting market conditions. But in the last analysis, the figures finally used in marketing, however obtained, are based on the law of averages, frequency, or proportion; the standards set, no matter how carefully and specifically adjusted, are in the last analysis averages, modes, or proportions and apply en masse rather than in detail. Again this does not mean that these data are not regarded as most valuable, as, indeed, the later statement of research work will show. A great problem in marketing is to get down beneath the law of averages and types. Production is so much more specialized and standardized, so much more precise than marketing that it is possible, given certain facts of material, dimension, and design, to set a maximum time for the performance of a certain specific operation. The appliers of scientific management have, furthermore, shown the possibility of determining a minimum time for this operation with conditions continuing the same and of prescribing the means whereby this minimum time need not be exceeded. In other words, the scientific manager in production can not only tell William Jones how long he should be in machining a certain part, but can furnish him with the best feeds and speeds to employ in doing the work in the time specified, and if the methods and time apply in Philadelphia

it is presumed that they will also apply in Boston. But in marketing, no manager, no matter how able and experienced, would attempt to tell Thomas Smith how long he should be in selling a pair of shoes to William Jones, nor to give more than general instructions as to the best way in which to do the selling. About the best this manager has been able to do is to say that in a week, on the average and according to the season, Thomas Smith should sell so many dollars' worth of shoes. In machining the part, the conditions are more standardized, the operation more specialized, the human factor is less and is more under control. In selling the shoes, the opposite is true. In production, the time for an operation can be measured by minutes and less; in marketing, I have encountered no practical use being made of units of less than one week.¹ This warrants the consideration for a moment of certain fundamental differences between production and marketing, bringing out why in business some men grow up on the "selling side" and some on the "manufacturing side."

These differences may be balanced against each other as follows. In production, men meet only as members of the business—as subordinates, peers, or superiors. Neither the customer nor the competitor is encountered directly. In marketing, on the other hand, men are in contact not only with the other members of the business, but also with the customer to serve and the competitor to meet.

In production, the problems are likely to be more those of cost—material, labor, and overhead. In marketing, the attention is more focussed on price. Knowledge of cost is not particularly essential. The market is fixing values outside of the businesses' control. Emphasis is also likely to be laid on quality and service.

In production, the problems on the whole are internal. In marketing, the problems on the whole are external. Competition

¹In all the foregoing the differences cited are more differences in large degree, than narrowly in kind. For example, time studies are themselves usually modes or averages or both, and allowances have to be made according to the character of labor of a community. And in marketing, on the other hand, the practice in large markets of having salesmen say nothing about the goods but simply answer and serve, and the abolition of the sales slip in the 5 and 10 cent store are steps toward production methods in marketing. Despite these theoretical similarities, the differences in fact in operation and result between production and marketing are as stated.

is on every hand. The market is to be analyzed. In production, there is probably for the individual business a possibility of greater independence of action. Marketing is probably more hedged about by the customs of the trade. In other words, as said before, marketing abounds in the human equation.

Another illustration of these differences can be taken out of the shoe industry from the manufacturing and marketing sides respectively. In the manufacture of shoes in general, the unit of measure employed in determining the output of the workman is the pair, or multiples of the pair. That is, a physical unit, a quantitative unit, is employed.

In the marketing of shoes, wholesale or retail, in general, the unit of measure employed in determining the output of the salesman is the dollar, the value of the sales. That is, a unit of value, a qualitative unit, is employed. It has been suggested, however, that the proper unit on which to calculate the retail salesman's efficiency and wages, as well as other expense, is also the pair. And this has been further supplemented by one with experience in production, who says that marketing is but a continuation of production only with the addition of utilities more in the nature of place and service than of form, and that the store salesman makes *sales* just as the factory worker makes *shoes*. The test of efficiency of the salesman, he says, is the number of sales, just as the test of the efficiency of the factory worker is the number of pairs, and when asked if salesman A selling 15 pairs of \$3 shoes, or \$45 worth, were more efficient than salesman B selling 10 pairs of \$5 shoes, or \$50 worth, in the same period, at once answered "Yes."

The true answer is that in the last analysis probably both the worker and the salesman are paid according to the value contributed by each to the shoes, only the contribution of the worker to each pair can be so exactly measured that the pair and multiples of the pair become the more convenient accounting unit. But the salesman's operation has not been so standardized. Greeting the customer, learning his wants, finding the shoe, fitting the shoe, closing the sale, starting the accounting on the sale, and the delivery of the goods are a whole series of operations more complex than skiving a shank or nailing a lift. Furthermore, in the latter operations the material and the machine have no personality—the operator only, whereas in the case of the salesman there is not only the unknown

quantity of the personality of the customer to reckon with but also the unknown interaction of the two personalities. So for the operations of the salesman the dollar which in itself is a common denominator becomes the more convenient accounting unit. And this very difference in units brings out most significantly the difference between production and marketing.

Scientific research then in marketing is evidently not an easy task, especially if scientific be given the same strict definition that it has in production. Of the importance of the subject marketing, however, there can be no question as a few facts will show. Forty per cent of the price paid by the ultimate consumer for a pair of shoes is consumed in getting the shoes to him from the manufacturer, exclusive of the manufacturer's profit, that is, in marketing them. For less staple commodities this percentage is yet higher, and even on so staple a commodity as groceries the marketing margin ranges from twenty-five to forty per cent. The idea is not that this margin is either proper or improper, but simply that it is a pregnant subject to investigate.

It accordingly was in the field of marketing that the Harvard Bureau of Business Research set to work. It decided to work by commodities, and for the first commodity, selected shoes as a staple regularly marketed by various methods—manufacturer to wholesaler, to retailer, to consumer; manufacturer to retailer, to consumer; manufacturer to consumer directly by mail or through owned retail stores. In the marketing of shoes, the division retailing was begun. The first concrete task was to ascertain the cost of retailing by securing as many individual retail costs as possible. Dearth of adequate records in many retail shoe stores and variations in bookkeeping in all of them necessitated the drafting of a uniform accounting system which has become standard in the shoe trade. Thus was the accounting variant removed. The great problem has been, of course, to remove as many variants as possible and get the marketing units on as near a comparable basis as possible; that is, to apply the standardization of production so far as applicable.

With the records of first 130 and then 650 stores adjusted to this system it has been possible to prepare normal and standard figures, some of which have already been referred to. The more

important figures were summarized in the bureau's Bulletin Number 1, as follows:

SUMMARY TABLE OF IMPORTANT FIGURES FROM THE RETAIL SHOE BUSINESS
NET SALES=100 PER CENT.

Item	Lowest percentage	Highest percentage	Percentage about which data centre (not an average)	Percentage about which a concentration is sufficient to indicate a realizable standard
Gross profit, including discounts.....	20	42	Low grade 23-25 High grade 30-33	
Total operating expense not including freight and cartage or interest.....	18	35	Low grade 23 High grade 27	Low grade 20 High grade 25
Buying expense.....	0.8	1.8	1.1	1.0
Salesforce expense.....	5.0	10.3	8.0	7.0
Advertising.....	0.0	8.8	2.0	1.5
Deliveries.....	0.0	1.4	0.6	0.4
Rent.....	1.8	14.6	5.0	3.0
Interest.....	1.0	7.9	2.5	2.0
Stock-turns, a year....	1.0	3.6	1.8	2.5
Annual sales of average salesperson.....	\$5,000	\$16,500	\$10,000	

The first two columns of this table show the range in the important figures of operation specified and the next two columns modes for these figures (not averages). The third column contains the mode for the whole group and the fourth column the mode for an efficient group large enough to be significant. The third column then may be said to provide a normal figure and the fourth column a standard—something to aim for. That these figures have served as standards for shoe retailers, resulting in reduction of expense, the bureau has concrete instances. This is not hard to understand when it is remembered that probably never before have the great majority of shoe retailers had any certain knowledge if their rent amounted to 7 per cent of their net sales that it should be 5 per cent, and could be 3 per cent in cities of over 100,000 population;

or that more than 8 per cent of the net sales is too much to pay for salesforce expense as defined by the Harvard System of Accounts for Shoe Retailers.

It is, furthermore, evident that there are variations in the operating expense of retail shoe stores of nearly 100 per cent (18-35). Preliminary studies of the retailing of other commodities, especially groceries, hardware, clothing and drugs, indicate practically as wide a variation. Just how far society, as represented by the consumer, is benefited by increased retail efficiency it is hard to say. But it does seem from observation in the retail shoe trade that a part of the saving in expense goes to the consumer in reduced prices. Even if the consumer does not benefit, for the stock of capital of society as a whole it is better to have this saving go into the retailer's profit than to have it largely consumed in marketing friction.

With still further data obtained from shoe retailers, the bureau expects further to classify and refine the above figures to detect the influence, if possible, of the important factors of the population of the community in which the store may be located, the grade of business of the store, and its volume of business.

At the same time, the research is being pushed back to the shoe wholesalers and the shoe manufacturers with or without stock departments. Also within a year an investigation of the marketing of groceries has been begun in a way generally similar to the shoe study. And already, though the same accounting system is being employed, conditions strikingly different in the retailing of these two commodities have been found. Some reference to those relating to stock-turn and depreciation cost will appear shortly in a bulletin on depreciation in mercantile businesses with special reference to the retail shoe business.

Costs are not the only subject of study. In fact, it might be said that just as the accounting system was an incidental necessity to the securing of costs, so the costs are an incidental necessity to the securing of the best practice. What, for example, is the best retail shoe practice? Should a shoe retailer buy from more or fewer sources? Should these sources be manufacturers or wholesalers or both? How much stock should he carry, and how should he determine it? In other words, cannot shoe retailing be made more scientific and economical, and how can it be made so?

Similar work will be done with the wholesaler and other agencies

of marketing and eventually with not only shoe and groceries, but with other commodities.²

But, after all, the material that has so far been obtained and is so far being sought by the bureau is really modes, whether of specific figures or of general practice. The bureau's schedule for shoe retailers states that, apart from the figures desired, the object of the general questions is "to bring out the character, experience, policies, and tendencies" of each store. The mode of the practices of stores with the most efficient records would be the best practice. Furthermore, these modes are based on a unit of time of not less than six months, and frequently a year is a still sounder foundation. And although a standard so based can be applied before the results it is measuring are six months old, still a considerable lapse of time is necessary before fruitful comparison can be assured.

In other words, the bureau, like the advanced selling organizations, is still dealing with averages and types, although through its non-competitive confidential position it has access to a much greater variety of experience. This work is worth while; it can even be called scientific in the sense that it is constructing an organized body of knowledge, but it is by no means scientific to the degree of the scientific management of production.

How far can the scientific management of production be applied to marketing? In production, the great fundamental problem is to determine the proper task. The storing, the routing, the greater standardization, the time studies, the improved methods and processes all relate fundamentally to the task, and this task once determined can be definitely reckoned on as long as the conditions remain unchanged, and these conditions either do not change or if they do their change can be measured and allowed for.

Similarly, in marketing, tasks are beginning to be searched for and set, but a very much longer unit of time is necessary and the given conditions change, and the change and its effect is difficult to estimate. If the bureau were to pursue the methods of scientific management in exact analogy it would take complete charge of a shoe store, measure every dimension, keep careful records of stock

²Further material of the Harvard Bureau of Business Research will be found in its own Bulletins 1-4, and some account of it has also appeared in the *American Economic Review* of December, 1913, and in *Papers and Proceedings of the American Economic Association*, March, 1915.

and sales, of salesmen and customers, correlate the selling more with buying, make the best selling stock most accessible to the fewest steps, take time studies of sales to various customers, and so on. As a result it might redesign and relocate the store, and change its buying and selling methods. Much could be done; much could be learned. How much would that knowledge apply to another store, and how much to the same store a year later?

What specialization and standardization are possible in marketing? How far can the experience of one section be applied to the methods of another? How much of the marketing problem is human and how much of this human factor is determinable and measurable? Must marketing always have its practice guided by general data, averages, modes, proportions—mass phenomena? What reorganization is desirable and possible in the present system of marketing, or is a new system developing? These are absorbing questions. Society has permitted a large margin for marketing cost and now society is investigating to see how this margin is used. Here is a tremendous field for research. Its potentialities are hard to overestimate.

THE RELATION OF RESEARCH TO THE PROGRESS OF MANUFACTURING INDUSTRIES

BY W. R. WHITNEY,

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We humans can never quite appreciate the incredible applicability and utility of new facts of nature. We are repeatedly shown by our experience, but each new example only augments our stock of wonderment or bewilderment. A very few months ago a certain well-known scientific investigator (Lord Rayleigh) found a slight difference in the density of nitrogen taken from air and nitrogen derived from other sources. He felt obliged to know about this little difference. In coöperation with Sir William Ramsay, he discovered argon. This was present in the atmospheric nitrogen and had always escaped detection. It formed less than one per cent of the air. It was discovered to be entirely inert and chemically inactive. This was an apparent promise of great chemical uselessness. At that time it was also exceedingly difficult to separate it from the air, and except for its scientific interest, it seemed destined to be left inactive. Newly discovered methods of liquefying air and of combining nitrogen for fertilizer, as in the cyanamid process, have just made the argon available commercially. Other pure scientific research had shown the value of such a gas in incandescent lamps, and it is just at this time being used to produce the most efficient incandescent lamps of our knowledge. It was the recently discovered differences between this gas and other gases which made this lamp possible. When its existence and properties were known, its application was relatively simple and easy.

Our American people are quick to see the value of new things where value exists. They are given, in this era, to actively utilizing every scheme which means better health, greater safety, greater pleasures, greater profits, and greater economies. We can hardly conceive of a people devoting their lives to inactivity and idleness. To better living conditions, to improve and extend manufacturing industries, and to conserve resources is quite generally the life aim of our ablest men.

A nation or a race does not stand still. It either advances or falls behind its neighbors. Knowing more has been the means of every nation's advance.

Research is a convenient word which covers the pioneer work upon which advances are founded. It is significant that as life becomes more and more complex, it is ever less possible for advances to be made by accident or by the designs of an individual working for short periods on different subjects. The day of that inventor is past who discovers an animal carrying a new hide, who modifies the shoe machinery or devises a new button or buttonhole. Each of these and a thousand other such details are now the fertile fields in which groups of trained experts are at work. We want shoes badly and there are many of us. We want them to wear well, even to the enamel on the brass eyelets. The fact that we are collectively willing to pay hundreds of thousands, or even millions of dollars for some slight improvement in a shoe or additional economy in the manufacture, indicates not only that we are many, but that we want actively every possible improvement and economy.

A Benvenuto Cellini lived and left the impression that he did all the work of an army of artists, inventors, soldiers, politicians, murderers, and—I may as well add—biographers. Besides his autobiography, he wrote books on the goldsmith art, sculpture and bronze, foundry practice, architecture, and poetry. There are none extant like him.

A Franklin wrote equally advanced discourses on electricity, on coal stoves, on the recently united states of America which he represented, on economy, on philosophy, and many other subjects. We have few Franklins and Cellinis today.

Today the research chemist, with his analytical methods, the metallographist, with his microscope, the physicist with his pyrometer, the mechanical engineer with his tensile strength apparatus, and the coke, gas, oil and electric furnace experts are each separately working on the still wonderfully complex cast iron of which a stove is made. Certainly they will not be satisfied, nor will we, the people, be satisfied, with any final state, so long as we can conceive of a better one. Iron must cast better, must rust less, be stronger, be permanent in the grate bar, be cheaper, keep an unaltered color, and so on.

The entire work involved in developing such new devices and

processes may be called research, but there is a part of it which deserves more careful attention than the rest. This part is sometimes called pure research. Most people mean by this term the search after new knowledge, without reference to its utility. Others mean the search for new and useless knowledge. There certainly are searchers after new truth who do not wish to see the usefulness of their disclosures. But facts of nature or true principles of science live forever and are sure to be useful. The attempt at worship of pure research for its own sake, as is often done, is merely the tipping backward of those who wish to stand erect, unbent by sordid aims in their search after truth.

Bergson points out that the essential object of science is to enlarge our influence over things. He says:

Science may be speculative in its form, disinterested in its immediate ends; in other words, we may give it as long a credit as it wants. But however long the day of reckoning may be put off, some time or other payment must be made. It is always then, in short, practical utility that science has in view.

A fair example of scientific research lies in the history of our talking at a distance. First, we called out as loudly as we could and the strongest voice was the best telephone. The use of some new knowledge which was not immediately or obviously connected with the voice was later put to use, and a tin or iron pipe was used for short distances as a speaking tube. After this idea was disclosed, plumbers, tinsmiths, or pipe fitters could do the rest. Then, later, the possible application of formerly entirely undreamt of principles to the increase of the speaking distance was tried. Those to which I refer were the electromagnetic principles which, in short, produced the telephone transmitter and receiver. These changed the short, thick pipe into a long, thin wire. I regret that I cannot go into detail to point out the extended researches which, without the slightest premonition of telephony, had to be made before the knowledge was at hand to enable Bell to contribute his part. Joseph Henry, for example, studying in the basement of an Albany school, had to wind wires with insulation and study the properties of the magnet, and this had to be followed by the studies of many others for half a century. To the early art, in the pipe stage, the telephone wire may have looked merely like a more refined pipe of the same material, but it was not. There were entirely new, and

what I may call remote, principles, brought into play and added to the metal of the pipe. These were discovered by patient scientific research of the highest order. The outcome could not have been foreseen from any knowledge of pipes or piping. In a practical treatment of the subject of Research and the Industries, this point must be made clear. The final gathering of the fruits of the labor of research often seems as little anticipated by the real planting done by search for new knowledge, as the picking of the fruit of a tree seems anticipated by burying a seed in the ground. Nevertheless, the developments are the same in the two cases. It may be for this reason that the President of the Carnegie Institution, in his 1914 report, referred to the work of the Institution in the words:

The general reader must take it for granted (provisionally, at least) that these investigations are in the main worth undertaking for in proportion as such investigations are fundamental, and hence worth carrying on, they will be difficult of exposition and more difficult of comprehension.

Of the lines of activity of that Institution, the farmer sees value in the studies in heredity in cattle, but wonders why anyone should want to synthesize rocks; the glass maker who sees value in the geophysics work, wonders why the sun spot work is of use, while the naturalist¹ says: "The sublime ideas of infinity of space and time, and the beauty of the simple laws of planetary motion, have had a value to mankind far transcending that of any so-called practical application of stellar science." Thus, those who have had the broadest comprehension have generally most highly valued pure research.

So we are now in our day apparently seeing our telephone wire grow finer and longer. Talking from New York to San Francisco is a thing of every day commercial experience. This, in turn, was due not alone to the use of longer wire or lower resistance or more delicate instruments (what Bacon calls an increase in the efficient), but involved new, remote ideas, the result of research. Such is the Pupin loading coil, for example, which has made long distance telephony possible. We are also aware that to all appearances the telephone wire is now being drawn so fine that it is altogether disappearing, and wireless telephony is an accomplished

¹ R. G. Harrison, President of the American Society of Naturalists, Philadelphia, 1913.

fact. This becomes possible not through finer wire drawing, but by the application of *newly discovered laws or principles of nature*. It was not even done by those who were most industrious in construction of telephones, any more than the tin speaking tube was really displaced by the tinsmith. The work was done by those already trained scientific investigators, who were learning new facts of physics or electricity which, at some stage of their work, seemed, applicable to telephonic use. This new work, this pioneer obtaining of facts which never revert to the undiscovered state, constitutes research.

Our government, among others, has schemes for the promotion of research. One of them is the patent law. If a discoverer will disclose his discovery to the public, he may exercise a monopoly of it for seventeen years. In some cases this is very encouraging, but it seems to have at least one serious defect. The discovery, besides being new, must be, at the same time, useful. With many great discoveries this is not the case. It may seem ridiculous to favor useless discoveries, but it is quite the reverse. The thing to encourage is the search and finding of new facts, principles, laws, and habits of nature; *i.e.*, additions to our knowledge without reference to immediate value. These are the surest guarantees of ultimate utility. The process of making knowledge useful is not half so difficult nor so rare as is the production of the knowledge itself. But the rewards usually go to the man who shows us the utility. For this reason we must plan better ways of encouraging scientific research. To emphasize this is the only object of this paper. It is being done to some extent. Many of those, living and succeeding under our system of advance, have realized the way the seeds have first to be sown. They have usually selected some special field where the utility to be expected from newly disclosed facts would be of greatest public good. In this spirit have been established many of those research institutions which are devoted to the health of the people, the cure of disease, etc. These are starts in the right direction and are naturally made where the need is most painful.

Of a little more remote benefit is such research work as is being carried out by the Research Corporation, from whose minutes the following abstract was made:

This far-sighted and patriotic conception found its realization through the "Research Corporation" which for administrative reasons was substituted for the Smithsonian Institution as the custodian of Dr. Cottrell's endowment. The objects of the Research Corporation as stated in its Charter are:

"To provide means for the advancement and extension of technical and scientific investigation, research and experimentation by contributing the net earnings of the corporation, over and above such sum or sums as may be reserved or retained and held as an endowment fund or working capital, to the Smithsonian Institution, and such other scientific and educational institutions and societies as the Board of Directors may from time to time select in order to enable such institutions and societies to conduct such investigations, research and experimentation."

Organized in 1912 as a stock corporation but precluded by its charter from paying dividends and capitalized by a group of gentlemen desirous of furthering Dr. Cottrell's objects, without personal profit, the Research Corporation undertook and successfully accomplished the installation of the Cottrell processes in various industries throughout the country, with the result that in two years' operation its surplus has provided the capital of twenty thousand dollars required by its charter, and a fund of over one hundred thousand dollars for scientific research.

A few such steps as this one would soon build up a fund of new knowledge. I think it is safe to say that most of our new knowledge of physical, chemical, and electrical phenomena has come to us through the publications of various scientific societies. The work was largely done as a by-product of poorly paid services in colleges and universities of the world. Let me illustrate this point. The general field of colloid chemistry is open for investigation. There is surely no more fertile field. It touches all the reactions of living organisms and most of those of organic and inorganic chemistry, from the growth of cells through immunity to disease in animals, to the decay of metals, from the coloring of glass and dyeing of fabrics, to the production of a river delta or the manufacture of an automobile tire. It is being largely done as the by-product or hobby of a few teachers in their spare time. As the principles governing this part of chemistry are made known, the applications in useful processes will be rapid, but there are many men ready to perform the latter operation compared to the few who are making known the laws involved. For every investigator who might point out from his experiments the possibility that the antitoxic action of immunized blood serum might lie in the magnitude of the electric charges on the colloids concerned in the reactions, there are hundreds of others

who will ably test the hypothesis when it is advanced. For every chemist whose experiments go to clarify the laws of tensile strength and the wear and friction of colloidal materials, for example, there are hundreds who will test his conclusions in new aero-metals and automobile tires. We in this country are particularly active in putting the "useful" into the invention, but we are less active in the study for the "new." For this reason it is necessary to encourage research of the advanced type. Anyone who has followed the subject knows that during the past ten or more years, the amount of research work in connection with the industries has greatly increased. Large manufacturing companies in many lines have groups of men who devote all their time to advancing the methods of manufacture by more or less pure research. They are never expected to become part of the production department, but are always kept on the exploring line in laboratories. There are now research laboratories connected with almost every art and profession. The American canners and the American dentists have them, as well as the companies making powder and shot, and those making armor plates. There are laboratories devoted to research on paper and others on paint, some working on cements and others on soils, some on gas lights and others on electric lights, some on fertilizers, others on sterilizers, and some on almost everything. They could all use more knowledge to advantage if they could get it. If there were no way to increase the rate of our acquisition of knowledge, then this argument would be useless, but we have had a lesson from Germany during the past forty years which shows one way of increasing the world's stock of knowledge. It is by encouraged or endowed research. Germany did it through her universities. Every year there were turned out one or two thousand men with the degree of doctor of philosophy. This meant that each one had done a couple of years research work and, in most cases, freely published it. The stock of investigators in the country was rapidly increased. The industries and the arts felt the effects. In 1912 there were 1,703 of these doctorates conferred there, 705 were on science and 355 in chemistry. How could such a country stand still in industry? Last March, Lord Haldane, addressing a teachers' meeting in London, said:

We are behind the level which has been reached by several of our competitors, a level which will put us in peril. We cannot dissociate national progress

from the basis of knowledge, even when it comes to the question of making money.

This conclusion is only a year old, but it is being proved.

In addition to the very helpful and important university methods of Germany, there should continue in America, beyond what is done by government laboratories and bureaus, the natural extension of the ideas exemplified by the cancer research laboratories and hospitals, the Rockefeller Institute for Medical Research, the Carnegie Institution, the Smithsonian undertakings and others.

Here also a start has been made in such work as Dr. Duncan inaugurated in the Mellon Research Laboratory at Pittsburgh and at the University of Kansas, in the very recent Brush endowed fellowships at the Nela Park laboratories, and in the Mayo brothers endowment at the University of Minnesota.

Dr. Woodward, President of the Carnegie Institution, has recently said, "Successful research requires neither any peculiar conformity nor any peculiar deformity of mind. It requires rather peculiar normality and unusual patience and industry." This certainly applies as well to the researches of an Edison, devoting his life to the immediate utilities, as to the abstract researches of the mathematician. It is for this reason that research ought to and does succeed in its applications in the case of many industries. In the industrial research laboratories, normality, patience and industry are apt to be encouraged. Interruptions are there at a minimum. Equipment, power, facilities and the rest are made a matter of some one's business. On the other hand the universities and colleges, which are forced to combine with short hours and short years the teaching of science and the methods and habits of research, are still our foremost organized research institutions. It seems possible that manufacturing companies may offer in the future nearly as great assistance to the increase of useful knowledge. Cooperation between laboratories of research in universities and industries has already been the subject of considerable study. There is a committee of one hundred of the American Association for the Advancement of Science which was appointed to encourage it. Naturally, with so great an undertaking, the progress may be slow. It is certainly possible for industrial research laboratories to economically add to scientific knowledge and to grow in the process. This fact is being recognized.

It is unfortunately true that most of what we may call the new knowledge in physical science of the past decade has had to cross the Atlantic for us. No one knows this better than those Americans who make the most use of it. The fundamental knowledge behind almost every utility which Yankee ingenuity has assisted, grew on older soil than ours. The list is almost discouraging to an American. The encouraging view to take is that we have it within our power to force the future to write different history. It is unfortunately quite safe to predict, for example, that just as most of our technical advances of the past can be traced to early fundamental discoveries in academic fields in Europe, so also we will have to see here future applications of still more modern European scientific thought. A wonderful list of useful results, processes, products, conveniences, cures and economies are sure to be produced by applications of the new knowledge of such things as radium, X-Rays, wireless waves, electrons, crystal structure, atomic numbers, canal rays, none of which were "made in U. S. A."

In physical science there is but little chance that our country will do its full share for years to come. If the wisdom of attempting it, rather than confining attention to short-sighted application of research to pressing commercial problems can be gradually recognized, the future is assured. It is surely the duty of our American research laboratories to contribute effectively in the advance of knowledge, and particularly is this true of those richly endowed with men, new materials and appliances.

And so I return to the cardinal point in any suitable consideration of research in its relation to our industries. Search for new knowledge is the insurance for the future of the industries. Many of them will later be manufacturing things not even conceivable today. The past has proved it. Most of the present products will, like the ox-yoke and flail of our grandfathers, be replaced in our factories by utilities more fitting to our new needs and less exhaustive of our energies and assets. This change is practically continuous. Technical complacency is like the mercuric chloride tablet taken internally—it means a lingering suicide. The incandescent lamp business will serve me for illustration, because I am more familiar with it than with others. I have seen whole factories entirely overhauled a number of times in the past few years, in order to make the newest lamps. Not only have entire floors of com-

plicated and expensive machines for making carbon lamps been thrown out and new machinery for making metal filament lamps installed, but before packing cases containing new machines could be opened and unpacked in the factory they have been thrown out as useless, as the advance from squirted metal filaments to drawn wire filaments proved the better way. Before the limit of factory efficiency on vacuum lamps could be reached, the introduction of nitrogen into the lamps brought the factories an entirely new factor, and now, before the consumers have more than commenced to feel the effects of the nitrogen-tungsten lamps, the manufacture of argon and its introduction into the incandescent lamp becomes a reality. If the research laboratories which discovered the means for bringing about these changes, with their corresponding economies, could tax the consuming public a cent for every dollar thus saved to the public, the laboratories would receive over a million dollars a year to spend for further research. This is not written in a spirit of dissatisfaction at all, but rather to point out what is probably true in many fields. The people are the ones most interested in research, though they may not know it. It is easier seen in therapeutic and curative research, but even there the more ignorant fail to realize the great lasting value of such work.

Bacon wrote:

For man, being the minister and interpreter of nature, acts and understands so far as he has observed of the order, the works and mind of nature, and can proceed no further: for no power is able to loose or break the chain of causes, nor is nature to be conquered by submission: whence those twin intentions, human knowledge and human power, are really coincident; and the greatest hindrance to workers is the ignorance of causes.

MOTION STUDY AS AN INCREASE OF NATIONAL WEALTH

BY FRANK B. GILBRETH,

Providence, R. I.

There is no waste of any kind in the world that equals the waste from needless, ill-directed and ineffective motions, and their resulting unnecessary fatigue. Because this is true, there is no industrial opportunity that offers a richer return than the elimination of needless motions, and the transformation of ill-directed and ineffective motions into efficient activity.

This country has been so rich in human and material resources that it is only recently that the importance of waste elimination has come to be realized. The material element received the first consideration, and in the comparatively few years during which the subject has received attention, an enormous amount has been done to conserve natural resources, to economize in the use of materials, and to utilize the by-products of industrial processes.

The human element is now receiving long-delayed attention. Vocational training, vocational guidance, better placement and better working conditions have become subjects for serious consideration in all parts of this country and of the world. Savings in human energy are resulting from these investigations. But the greatest saving in time, in money and in energy will result when the motions of every individual, no matter what his work may be, have been studied and standardized.

Such studies have already been made in many trades, and have resulted in actual savings that prove that the results of the practice confirm the theory. In laying brick, the motions used in laying a single brick were reduced from eighteen to five, with an increase in output of from one hundred and twenty bricks an hour to three hundred and fifty an hour. In folding cotton cloth, twenty to thirty motions were reduced to ten or twelve, with the result that instead of one hundred and fifty dozen pieces of cloth, four hundred dozen were folded, with no added fatigue. The motions of a girl putting paper on boxes of shoe polish were studied. Her methods were changed only slightly, and where she had been doing twenty-four boxes in forty seconds, she did twenty-four in twenty seconds,

with less effort. Similar studies have cut down the motions not only of men and women in other trades but also of surgeons, of nurses, of office workers; in fact, of workers in every type of work studied.

Motion study consists of dividing work into the most fundamental elements possible; studying these elements separately and in relation to one another; and from these studied elements, when timed, building methods of least waste.

To cite a specific example: The assembly of a machine is the piece of work under consideration. The existing method of assembling the machine is recorded in the minutest detail. Each element of the assembly is then tested—the method used in handling the element being compared with other possible methods. In this way, the most efficient elements of an assembly are determined; and these elements are combined into a method of assembly that, because it is the result of actual measurement, is worthy to become a standard. Such an assembly is that of the braider, manufactured by the New England Butt Company. As a result of motion studies made upon this, where eighteen braiders had been assembled by one man in a day, it now becomes possible to assemble sixty-six braiders per man per day, with no increase in fatigue.

The accurate measurement involved in getting results like this includes three elements. We must determine: first, the units to be measured; second, the methods to be used; and, third, the devices to be used.

The unit of measurement must be one that of itself will reduce cost, and should be as small as the time and money that can be devoted to the investigation warrants. The smaller the unit, the more intensive the study required. The methods and devices to be used are also determined largely by the question of cost. Naturally, those methods and devices are preferable which provide least possibility of errors of observation. Such errors have been classified as of two kinds: first, errors due to instruments; and, second, errors due to the personal bias of the observer. The newer methods of making motion studies and time studies by the use of the micro-motion method and the chronocyclegraph method exclude such errors. Fortunately, through an improvement and cheapening of the devices, it is now possible to make accurate records of motions, even when no great outlay for the study can be afforded.

The micro-motion method of making motion studies consists of recording motions by means of a motion picture camera, a clock that will record different times of day in each picture of a motion picture film, a cross-sectioned background, and other devices for assisting in measuring the relative efficiency and wastefulness of motions. Suppose the process of assembly before cited is being micro-motion studied: The assembler is placed before the cross-sectioned background; the micro-motion clock is placed where it will record in the picture, yet not disturb the worker; near it is another clock which serves as a check on the accuracy of the special clock. The assembler, who has been rated a skilled worker under the old method, naturally does the best work possible, since a record is being made of his performance. The observer operates the motion picture camera, which, however, allows him freedom to observe the assembly process continually, and to note possibilities for improvement. From the data on the film and the observations of the observer, an improved method can be formulated. The standard method is seldom derived from the work of one observed worker only. It has been noted that *the ideal method seldom lies in the consecutive acts of any one individual*; therefore, many workers are observed before the final standard is deduced.

These micro-motion records give all the data required except the continuous path of a cycle of motions. This lack is supplied by the chronocyclegraph method. The chronocyclegraph method of making motion study consists of fastening tiny electric-light bulbs to the fingers of the operator, or to any part of the operator or of the material whose motion path it is desired to study. If it is merely the orbit of the motion that is to be observed, a photograph is made of the moving part to which the light is attached, during the time that this part is performing the operation. If the direction, relative time, and relative speed are to be noted, the path of light, through controlled interruption of the circuit, is made to consist of dots or dashes, or a combination of the two, with pointed ends, the point showing the direction.

Through the micro-motion studies and the chronocyclegraph studies, then, the expert formulates the standard method. It is important to note the changes which the installation of a standard method implies. This method consists of improved motions, and

implies, first, changes in surroundings, equipment, and tools; and, second, changes in the type of worker assigned to do the work.

During the motion study of the assembly, it was found that more efficient motions could be made if the machine assembled was placed on a special table, which could be turned on its side and transformed into a lower table, after the base group of the machine had been assembled. It was also found that speed was gained and fatigue eliminated, when the parts of the machine were arranged in an obvious sequence on a vertical packet. These devices were immediately supplied at little cost and with great result in saving. Through these devices, and the other changes made by motion study, it became possible to accomplish over three and one-half times as much assembly as had previously been done. Such changes are typical, and it is typical that the inventions *result from* the motion study.

As for the type of individual suited to the work, the simplification of the process and the reduction of the motions to habits often make it possible to utilize workers with less initiative and skill, assigning the more skilled workers to a higher type of work. In the case of the assembly, the original assemblers were retained and enabled to do much more work with less fatigue. It has also been possible to train inexperienced men to assemble in much less time and with less effort than was formerly the case.

The result of the introduction of motion standards is an increase in output and wages, and an accompanying decrease in cost. The decreased cost and the increased wages both depend, of course, on the increased output. The output is increased, because the motions used to make any one unit of the output are less in number and more efficient in results. The average cost of output increase is sufficient not only to provide for the higher wages necessary to induce the workers to do the amount of work prescribed, and to enjoy doing it, but also to allow of at least enough profit to the management to cover the cost of the investigations that resulted in the standard.

The *quality* of the output is maintained through a new type of inspection, which considers not only the output itself, but the elements—material and human—which result in that output. Nothing is a higher guarantee of quality than insistence on a standard method.

Along with the laboratory investigations from which motion-study standards are derived, goes a general campaign to arouse every individual in the organization to think in terms of elementary motions. Such simple office equipment as pencil holders are motion studied, and every member of the organization is encouraged to observe and record his own motions in performing the most elementary of operations. Motion study may be carried on with no devices, and everyone is expected to know how to make at least the preliminary investigations. In this way, the spirit of motion economy grows throughout the entire plant, with a consequent elimination of waste motions and a growing interest in the more scientific methods of motion study.

What, now, are the results of this motion study upon the individual men doing the work, upon the factory group, upon the industrial world and upon society at large? The men themselves become more efficient. They become specialists—skilled workers. They learn the motion-study method of attack, and are thus more fit to undertake any type of work. They learn to think in elementary motions, and to eliminate waste in every activity of their lives. The increased output of each individual worker does not result in the employment of less men in the plant. The transference of skill that maintenance of standards implies, means that many teachers are needed. These come, naturally, from the ranks of the skilled workers. The planning that is necessary is also usually done by workers promoted to the planning department. At present, at least, the demand for men trained under motion study is far larger than the supply; it will be for years to come—certainly until the increased output results in the increased demand which is its inevitable consequence.

The industrial situation is bettered through the general spread of the ideas of waste elimination, and through the practical application of its principles in whatever relations those trained under it may enter. How far this influence upon the industries will extend will depend entirely upon the amount of work done by individuals, and upon their coöperation. At present, many individuals are engaged in, or are at least interested in, motion study and waste elimination. But there is not the proper degree of coöperation. Such coöperation can only come as motion study becomes a matter of interest to society at large. The whole social group is already being affected

by the results of motion study. One typical result is the gradual filling in of the gap between the school and the plant. An intensive study of motions is proving that there are far greater likenesses in trades, and even professions, on the mechanical side, than we have ever believed possible. The demand of the industrial world will be more and more for young workers trained to be finger-wise, with a knowledge of the fundamentals of motion economy, and with an understanding of the relationship between efficient motions and success in the industries.

The industrial world is becoming more and more definite in its requirements for industrial training. This is making it possible for all types of schools to give their pupils a training which enables them to fit into working conditions without the customary, preliminary jolt, and months and years of adjustment. The training required is so general, yet so definite, that it may well prove an important part of the training of every young man or woman, whether he goes ultimately into the industries or not. This training is being given not only in the technical schools and in the trade schools but also to some extent, at least, in the ordinary public schools. It consists of making every pupil, to as great an extent as possible, "finger-wise," that is, of training his muscles so that they respond easily and quickly to demands for skilled work. With this training goes an appreciation of the importance of such "finger training," and of its relation to motion economy. The pupils are also given an appreciation of the problems of industry, and of the relation of these problems to social development.

An effect of motion study in the industries upon society is its influence toward spreading the belief that real efficiency considers and conserves the human element; that it makes fatigue study imperative; and that its fundamental idea is conservation, not exploitation.

The great need today, as in all fields where progress is to be made, is education. The community as a whole must be educated as to the importance of motion study, and as to the possibility of every man and woman making such motion study to some extent for himself. The technical press and the press generally are doing much to spread these ideas. Much is also being done by the colleges, where many are studying and teaching the subject. Such widespread education is absolutely necessary before we can hope for

the reclassification and standardization of the existing trades, which is a necessary future step. The trades must be reclassified, according to the amount of skill involved in the motions used; and must then be standardized in order that the necessary training for entering them and succeeding in them can be given. As an example of reclassifying a trade, we would recommend, for example, for brick work, five classes:

Class A—Ornamental and exterior face brick and molded terra cotta.

Class B—Interior face tiers that do not show at completion, where strong, plumb and straight work only is needed.

Class C—Filling tiers where only strength is needed.

Class D—Putting fountain trowels and brick packs on the wall near the place, and in the manner where the other three classes can reach them with greatest economy of motion.

Class E—Pack loaders, brick cullers and stage builders.

The pay of the A and B classes should be considerably higher than is customary for bricklayers. The pay of the C, D, and E classes should be lower than is customary for bricklayers, but much higher than the pay of laborers. This classification will raise the pay of all five classes higher than they could ever obtain in the classes that they would ordinarily work in under the present system, yet the resulting cost of the labor on brickwork would be much less, and each class would be raised in its standing and educated for better work and higher wages. In the case of brickwork this new classification is a crying necessity, as the cost of brickwork must be reduced to a point where it can compete with concrete. Improvements in making, methods of mixing, transporting, and densifying concrete in the metal molds of today have put the entire brickwork proposition where it can be used for looks only, because for strength, imperviousness, quickness of construction, lack of union labor troubles and low cost, brickwork cannot compete with concrete under present conditions. Having sub-classified the trades, the second step is to standardize them. And both classification and standardization demand motion study.

The other great need, besides education, is, then, a bureau of standards, where work done in motion study can be collected, classified, and put into such form that it will be available to everyone. There is an enormous waste, at present, from repeating investigations

along the same lines of work. There is not only the waste from the actual repetition involved, but also the fact that the time utilized in doing work already done could, instead, be devoted to the original work that is sadly needed. It is the work of the United States government to establish such a bureau of standardization of mechanical trades. The standards there derived and collected would be public property, and original investigators could invent from these standards upwards. Most important of all, perhaps, these standards would furnish the ideal means for teaching or transferring skill to the young workers who desire to enter a trade.

The reclassification of the trades and the bureau of standardization are, then, the two great needs for motion study development. But these will come only when the individuals interested apply motion study to their own work, and show willingness to coöperate with others.

The industrial opportunity afforded by motion study is not, then, some great future opportunity of which we dream, or some remote and inaccessible opportunity for which we must collectively strive. It is an opportunity ready, here and now, to be grasped by each one of us individually—and it is the greatest industrial opportunity that this century affords.

LOW WAGES AND THE LOW WAGE ENVIRONMENT

BY FRANK P. WALSH,

Chairman, United States Commission on Industrial Relations.

A thought occurs to me as I look about the world and observe the great forces that have been created within the last decade to work for the betterment of mankind. I see great organizations of men and women well equipped, thoroughly provisioned, sufficiently financed and backed by a moral weight such as the world never before saw and has not yet realized. It seems to me that those of us who are earnest and trying to be thorough in our efforts for better things for all have a chance before us such as no other portion of mankind ever before had.

Another thought, however, occurs to me, and that is, that we have a divided army. A common enemy confronts us; a solid phalanx—the allies of sin and suffering, of disease and premature death. But look at our army. We are dressed each in a different uniform. Bad tactics on our part divide our forces. We travel parallel roads. But the movement of our divisions has not taken the formation we desire. We cannot make a frontal attack in force and carry by storm the common breastworks of the enemy.

We have great organizations which are fighting with scientific coolness against disease. We have religious bodies battling zealously for a purer life for us all. We have hosts of women struggling for the ballot in order to give more certain and definite aid to us. We have great philanthropies engaged in an effort against distress. We have many agencies which are making war on the evils of mankind. But we fight, paired off, as it were, religion against sin, science against disease, social justice against false economics, philanthropy against suffering. Such is the line-up for the fray.

Let us have a new declaration of war and a grand mobilization! I hold that every organization we have for good should strike a blow at the main offender—

Low wages and the resultant indecent standard of living for a thinking and toiling race!

We should unite all our agencies of betterment and reform and make an attack in force on this common enemy.

The victims of sin and suffering, disease and premature death are merely the dead and wounded in the great struggle for existence.

When we divide our forces into three great battalions: those working for better economic conditions, those working for better social conditions, and those working for better moral conditions, we make a monumental blunder. Lines cannot be drawn between the economic, social and moral life of the people. They rise or fall together and economic conditions always dominate. The greatest influence on life is produced by environment. The only factor which enters into environment is the economic factor. The income of a family absolutely determines its place of living, its manner of living and its interpretation of life. Persons will vary in mental type, in breadth of vision, in clarity of view, in outlook on life and its hopes and destinies. That is inevitable. But these, too, are tempered by environment.

The Economic Factor

So well recognized is this fact that while the thought may strike us as semi-new, it is one that everybody realizes. You have no hesitation in saying that there are various classes. What are classes? They are human beings of various strata. They actually dwell on plateaus of various heights, according to popular and universal conception. Why? Simply because of the economic factor in the lives of the various classes. Each takes on the color of its class according to its income. The economic factor decides for each class the texture and value of its clothing, the quality of its food, its place of residence, its associates, its tastes, its amusements; indeed, every outward aspect of life is lived practically the same way by each individual in each class. And the economic factor enters more largely into the mental aspects of the individual than it does into his physical aspects. His belonging to any of the various classes practically determines for him his views on morals, sociology, sin, and suffering. If you will analyze your views, you will find that they practically coincide with those of persons of your own class.

This class feeling is so strong that it breaks down the mental and moral fiber of the individual. You will note among your own friends who have had the misfortune or fortune to rise or fall from one class to another, an entirely changed set of opinions about every

matter that vitally concerns society. They no longer hold the opinions they had while a member of another class, but consciously or unconsciously assume the mental colors and hold aloft the class flag of their new fellows.

The point I am trying to make is that if those who are concerned with social and moral betterment would join in with those of us who are primarily concerned with establishing economic justice; if they would help to force better wages, a decent standard of living, a better environment, more leisure and less laborious situations, on ninety per cent of the people, we could cut their work at least in half.

I agree with Henry Ford to this extent: That the sane and well nurtured person is instinctively good and primarily honest. He may be the victim of greed and forced to the same attitude as that used by his oppressors, but that is usually because he is economically powerless and forced to go with the tide.

We should begin the new warfare by getting our conceptions "on straight." At present we have a veneration for wealth in this country that has made concrete wealth supra-legal. It has usurped powers to itself that in the course of generations have become practically recognized by the great public as belonging to it. The first principle is shown in the law allowing a man to engage in a business and wrest his profits, not from the business, but from what should be the just earnings of his employees. We look with as much pride and envy on the man of wealth who has literally starved his employees and brought about a degenerate and subnormal new generation as we do on the man who has amassed a fair competency and at the same time given to those working with him an honest share of the profits of the enterprise. We regard with greater admiration the so-called captain of industry who has shot his way to tremendous riches through the ranks of his employees than he who has gained economic independence by an invention which has lightened toil and sweetened life.

New Maxim for Society

What we need is a saner appreciation of the facts of life. We have a perfect right to withhold the protection of organized society, in its governmental or legal function, from one man who is doing many of us hurt. The old maxim of "the greatest good to the greatest number" has been recast into the idea that the powers of

government should be exercised or withheld for the greatest good to the least and weakest of mankind. If this new concept breaks down the methods by which enormous fortunes are secured, the world is better served. Great fortunes are as active a menace in themselves as they are to their possessors. They lead to greater and greater travesties on justice and a more insane vision of power by those who control them. They are gold gone mad with lust of conquest. The owners of such fortunes must have, indubitably, at some time or the other crossed the line of true economics, ethics, equity and the criminal law. An enormous fortune is a wrong proved by itself.

Those guilty of economic abuses for gain may be divided into these classes: Those who, by corruption and other devious means, secure franchises and special privileges of various sorts to exploit entire communities and whole sections of the country; the men who, by similar methods, secure a grip upon land and other natural resources, the common inheritance of all, to selfishly exploit the same, or hold it away from the beneficial use of their fellow-man; the men who work thousands of other men in dangerous and unhealthful factories and mines; the men who employ women and children in unhealthful occupations, or in insanitary workshops; the exploiting employers who impose upon their helpless workers long hours at wages which will not allow for that sweet contentment of mind which makes of labor a joy; the man who sells decayed or adulterated food; the man who robs his own employees of the product of their toil and gives away the money in showy benefactions and stupendous foundations; the men who through organizations, whether termed benevolent, commercial, employers' or what not, combine to coerce and browbeat other men in their effort to organize and obtain by concert of action a just length of work day, decent conditions and compensatory wages; the bankers and financiers who foster "watered" stocks and force employees of large industries to work for low wages because the earning power of the companies has been absorbed in advance; and last, but by no means least, that large class of lickspittles who have little or nothing themselves, but side in with and work for bad conditions, because they get, or vaguely hope to get, a moiety of the general stealage.

Worst of All Reactionaries

The latter class is so large and their combined efforts so vitally assist in keeping alive rotten social and industrial conditions, that they deserve to rank ahead of several of the divisions first named. They are the oft-dubbed "Little Brothers of the Rich"—usually visionless clerks, briefless lawyers and so-called "leaders of thought," who ought to be butlers. To them every protest against wrong is "demagogic." They "view with alarm" the socialistic tendencies of our times, and the "growing disrespect of the people for vested rights." Usually upon meager salaries themselves, hopelessly submerged, but submissive and servile, they are the product of false teaching, mean ambition, lack of thought, personal weakness, and victims, generally, of circumstances beyond their control. Because so many of them are not conscious of wrongdoing is the only reason I have for placing them among the minor offenders.

Such men as form these various divisions are the voluntary offenders against economic justice and the laws of the land. They make a profit, or hope to, or help to through bad economics and violated laws.

But look at the other side of the economic ledger. There you will find the millions who are the victims of these profit-mongers and law-breakers,—the involuntary offenders. They are the thieves, harlots, the weak, the deficient, the men and women badly poised mentally through shameful environment and poor food, stretched over generations, the near-zeros of civilization; the maimed, the crippled, the blind, the hereditary victims of disease and vicious habits, children of parents whose labor sapped them of the strength that should go to endow a future generation with a good brain and an adequate body; victims of drink who unavailingly have tried to snatch a few golden moments out of a gray world; children crippled in the streets and factories because organized society has not yet reached the plane where it adequately cares for its young; the survivors of war and the wretched victims of financial panics who have suffered because big moneyed men know that a money scare ever so often shatters values and makes it profitable to buy what others must sell to live.

I call all of this last named class involuntary offenders, because they drop naturally into that class through economic pressure and

environment. Many of them, of course, are not truly involuntary victims, but there is that in their makeup and in the breeding they have had that causes them to sink rather than dash themselves again and again against the harsh line-up of forces which life has presented to them.

I do not believe that anyone can study at first hand conditions as they exist today, and by these I mean the every-day facts of life as they affect the economic condition of mankind, and not thrill with the zeal of the proselyte in the cause of a better day. I believe that you can't reach a man's soul, any more than his heart, except through his stomach. It is positively shameful to hurl a "Thou shall not steal" at a hungry or ragged human being.

Let us all dress and have dinner before we talk of morals.

An element in life that has far-reaching consequences is that we are apt to live merely by comparison. We take as a matter of course the crowded East Sides, the Hell's Half Acres, and the other strikingly named districts in our big cities. We don't seek out reasons nor hunt for solvents. We see them from the time we are able to toddle until we die, without a proper emotion nor a sense—a gripping vital sense—that something is wrong. We regard them with the fearful complacency with which black death, diphtheria, smallpox and other dangerous diseases were regarded in by-gone days, as something inevitable and in accord with life.

The East Sides and the Hell's Half Acres are the foulest blots on civilization. They advertise that injustices and menaces to the health and well-being of communities are tolerated for the sake of profit. They show that property is in the saddle riding down human life. They prove that the tenants, giving up their lives in toil, cannot earn enough to be decently housed. And we stand for the sort of living they must have and the kind of wages they must take.

Shorter Course Charted

In placing economic conditions before moral questions, I do not intend to belittle the wonderful work that has been done in the world to help the unfortunate and to place obstacles in the way of those who would profit through the prostitution of men and women by trafficking in their frailties. It is to the glory of our race that thousands of men and women have gone out of their way to take part in this task, as arduous and thankless as any person

could essay. I am merely trying to point out that it is my belief that their objective is in much easier reach. I am trying to chart for them what I believe to be a shorter course to their haven. We know, as rational beings, that human misery, so universal as that caused by poor wages and viciously sinful hours of toil, is infinitely worse than the result of any individual's moral lapse or folly, degrading and vile though it may make the victim appear.

Napoleon said that an army marched on its stomach. He meant that it was only good for severe taxing of its strength as long as its larder was filled. He might have said it with equal truth of the entire race of men. The poorly nourished are weak comrades in a war on rotten industrial conditions, adulterated foods, vice, wholesale murder, or any other of those countless evils that have an economic basis.

Does this sound pessimistic? I hope not, for I am optimism incarnated. I believe the world is getting better every day. I believe more and more every day that a greater number of persons are becoming genuinely interested in the well-being of humanity than ever before, some from personal reasons, but more from that divine fire which a pure and undefiled love for even the lowliest of us inspires.

Some one has said there is more of the Christ spirit in the world today than ever before. The very aims that the honest battlers for the right under their different flags aspire to show that there is a mighty undercurrent—a soul movement, if you will have it that way—that is making for better things.

Let us fight for all the good we may achieve—whether religious, economic, social, moral; but I believe that every sincere soul should line up with every other sincere soul in a fight to a finish to lift from the world the weight of agony caused by insufferable conditions resulting from *low wages, the cruz of bad economics*.

THE ADEQUACY OF AMERICAN WAGES

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I. The Measure of Wage Adequacy

The adequacy of American wages, like any other question in social science, should be discussed in spirit of honest truth-seeking. Everywhere the problem is leading to endless and often to bitter controversy between employers and wage-earners, who ordinarily base their contention that wages are "too high" or "too low" upon tradition or prejudice rather than upon scientific analysis. The result is dissention and misunderstanding. The student of economics approaches the matter scientifically. First, he studies the wage facts; second, he decides upon some standard by which wage adequacy may be measured or judged; and third, he compares the prevailing wages with this standard in order to determine their adequacy.

The present study is based on three propositions which are fundamental to any consideration of wages:

1. Industry must pay a wage sufficient to maintain the efficiency of its workers.
2. Society must oppose any wage that leads to poverty, hardship or social dependence.
3. Wages must be sufficient to enable the worker and his family to live like self-respecting members of the community.

These three statements are so generally accepted that they require little elaboration. It seems evident that unless industry pays a wage that will maintain the efficiency of its workers, industry must deteriorate. It seems equally evident that unless society insists on a wage sufficient to prevent dependence, the family, the school, and the state must suffer. At the same time, if progress is to be made, the wages paid must make possible self-respect, while they stimulate men to activity. All three propositions are stated in terms of social expediency. The social justice of the present wage system will not be called into question.

Under the present social system, a man's wage must be a family

wage. The home is looked upon as the basic social institution. Each man is expected to make a home, and having made it, to earn a living sufficient to allow the wife to devote her time and energy to the care of the home and of the children.¹ While the mother presides over the home, the father must receive a wage sufficient to keep his family on a basis of physical health and social decency.

The family most frequently used in recent social studies consists of a man, wife, and three children under 14 years of age. Such a family corresponds in size with the average American family, the children are too young to work for wages, and their mother should be in the home and not at work in the factory. This family is sometimes called the "normal" or "type" family.

No single wage will provide health and decency for all families. Some women cannot keep a home on \$40 a week that others can keep on \$20. The ability and personality of the housekeeper are large factors in making both ends meet. However there is a minimum income below which the average woman cannot provide health and decency for those dependent upon her housekeeping.

II. *What is the American Wage?*

A discussion of wage adequacy begins, of necessity, with an analysis of wages. What is the American wage?

The manifest shortcomings of an "average" as a means of describing wages have led statisticians to the use of classified wages. Instead of saying that the wages of 1,000 men average \$2.63, the statistician notes that of the 1,000 men, 28 receive a wage of from \$1.00 to \$1.49; that 324 receive a wage of from \$1.50 to \$1.99; and

¹ The extent to which the various sources contributed to family income in a group of 25,440 families is shown in the following table:

	Per cent
Husbands	79.49
Wives	1.47
Children	9.49
Boarders and lodgers	7.78
Other sources	1.77
	100.00

From *Cost of Living and Retail Prices of Food*, Commissioner of Labor, 1903, p. 51, Government Printing Office, Washington, 1904.

so on. By this means, a group picture is made of the amount received by all of the wage-earners.

There are a number of rather complete summaries of the wages paid in certain American industries—chiefly manufacturing.² A brief statement of some of the more important classified wage figures appears in the following table:

THE WAGE RATES OF ADULT MALES EMPLOYED IN MANUFACTURING INDUSTRIES

State or industry	Year	Total adult males	Cumulative percentages of adult males receiving wage rates per year of less than		
			\$500	\$750	\$1,000
California ³	1911	107,950	7	30	63
Iowa ³	1912-13	48,710	12	61	87
Kansas ³	1909	50,720	26	70	91
Massachusetts ³	1912	420,524	28	67	90
New Jersey ³	1911	243,753	36	71	89
Oklahoma ³	1911	17,007	17	68	90
Wisconsin ³	1909	141,218	32	77	94
Census ⁴	1905	2,124,069	47	79	94
U. S.—Iron and Steel ⁵	1910	172,706	8	60	85
U. S.—Textiles ⁶	1910-12		60	90	95

The manufacturing industries of the north and east pay to the adult male wage-earners wage rates of less than \$750 in seven-tenths of the cases, and of less than \$1,000 in nine-tenths of the cases. With the exception of California, the percentage of men receiving

² The meager wage figures covering transportation, municipal utilities, mercantile establishments and mines indicate that the wages paid in the manufacturing industries are fairly typical of wages paid by other industries in the same locality requiring a like amount of ability or training. See *Income*, Scott Nearing, New York, The Macmillan Company, 1915, Chapter 4.

³ Compiled from the Reports of the State Bureau of Labor.

⁴ *Census of Manufactures*, 1905, Bulletin 93, *Earnings of Wage-earners*, Washington, 1908, p. 11.

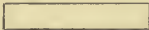
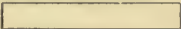
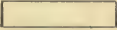


⁵ *Report on the Condition of Employment in the Iron and Steel Industry*, Senate Document 110, 62d Congress, 1st Session, Volume I, p. xxvi.

⁶ Compiled from the Reports of the Tariff Board, from the Report by the Federal Department of Labor on the Strike at Lawrence, 1912, and from the state reports.

less than \$750, and the percentage receiving less than \$1,000, are remarkably uniform. The one-tenth of the adult male wage-earners who receive wage rates of more than \$1,000 a year are the income aristocracy of the wage-earning class. They are, for the most part, protected by powerful trade unions, by long terms of apprenticeship or by special training. They constitute a minority of the wage-workers about whom no question of wage adequacy will be raised. The present discussion will concern itself with the nine-tenths of the wage-earners who are paid wage rates of less than \$1,000.

A diagram brings out, in striking form, the more detailed facts of the American wage scale. Massachusetts, one of the leading manufacturing states of the Union, reports the wage scale for a larger number of persons than any other state.

THE WEEKLY WAGE-RATES PAID TO 436,576 ADULT MALES IN THE MANUFACTURING INDUSTRIES OF MASSACHUSETTS, 1912⁷

Weekly wage	Adult males	
Under \$10	126,011	
\$10 but under \$15	166,440	
\$15 but under \$20	98,839	
\$20 but under \$25	31,416	
\$25 and over	13,870	

The diagram is illuminating. Almost exactly four-fifths of the adult males at work in one of the largest manufacturing states of the Union are receiving wage rates ranging from \$8 to \$20 per week. Ten men in 100 receive \$20 per week or over and three men in 100 receive \$25 per week or over. The great bulk of the men at work in the manufacturing industries of Massachusetts are paid a wage rate of less than \$20 a week.

The fact should be emphasized that these figures show not what people earn, but the amounts paid by industry to those who do its work. The wage scale is set in each industry. Let 1,000 seek places in the factories of Massachusetts. They would find a wage scale already in existence that would pay to 500 of them less than \$15 per week and to 900 of them less than \$20 a week.

Again, the wage figures do not represent the amount actually received by workers. The figures for annual wages were secured

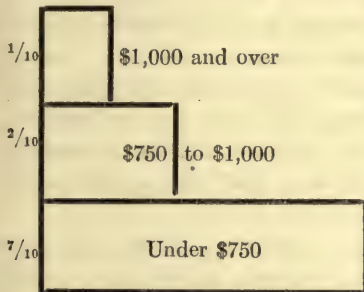
⁷ *Statistics of Manufactures for Massachusetts, 1912, Boston, 1914, p. 84.*

by multiplying the weekly wage rate by 52. Most wage-workers do not earn in a year 52 times the weekly wage rate. Unemployment, varying in intensity from one trade to another and from one year to another, reduces yearly earnings a tenth, a fifth, or sometimes even a third.⁸ Wage-workers earn wages only while they work and work in modern industry is a gravely uncertain quantity.

The American wage—the amount paid by American industry to its workers—may be characterized briefly in these terms. A comparatively small percentage (from 5 to 10 in 100) of the persons

Summary of Wage Rates in
American Industry

(No allowance for unemployment)



gainfully employed in modern industry are on a salary basis. The vast majority of the employees (from 90 to 95 in 100) are paid a wage or its equivalent. Among those who work for wages, the great majority (about nine-tenths of the adult males) receive wage rates of \$1,000 per year or less. The wage rates of two-thirds of the males fall below \$750; a third below \$500. These statements make no allowance for unemployment, which is a constant, irreducible

factor. Unemployment due to lack of work alone is generally met with.⁹ Add to this the unemployment resulting from sickness, accidents, and other personal causes, and the proportion is still higher.

Are these wages adequate? Do the amounts paid by American industry enable the worker to support a wife and three children decently? Three phases of the matter will be considered:

⁸ *Work and Wages*, S. J. Chapman, Part II, New York, Longmans, Green & Company, 1908, Chapter 15.

Unemployment in the United States, Scott Nearing, Quarterly Publications of the American Statistical Association, Vol. II, September 1909, pp. 530-535.

⁹ An idea of the extent of unemployment may be gained from the reports of the New Jersey and the Massachusetts Labor Bureaus, showing the number of days worked in the various industries. See Bureau of Statistics of New Jersey, 1913, Paterson, 1914, pp. 125-126; also statistics of manufactures for 1911, Bureau of Statistics for Massachusetts, Public Document No. 36, Boston, p. 137.

1. The adequacy of wages to provide health and decency for a man, wife, and three young children.
2. The adequacy of wages in terms of up-to-date business accounting and business practice.
3. The adequacy of wages to meet current social obligations and social standards.

III. The American Wage and Physical Efficiency

The adequacy of wages may be tested in terms of the health and decency which are involved in the maintenance of physical efficiency. If industry is to support its workers, if society is to see to it that families are not forced to depend upon charity, wages must be sufficient in amount to enable the wage-earners to buy health and decency. At the present time, in the United States, the wages paid to a considerable portion of the adult male workers are insufficient to permit decent family living.

A number of attempts to ascertain the cost of a decent standard of living have been based on the assumption that physical health, education up to the age of fourteen, and the other minimum requirements of modern American life were included in the term "decency."

There is a certain minimum of food, clothing, shelter and the other necessities of life below which physical health and social decency are impossible. That minimum exists in terms of bread and butter, shoes, overcoats, medical attendance and school books. It is fixed by the demands of nature and by the standards of society, wholly independent of cost or price; therefore any discussion of the cost of a decent living begins with an analysis of the various items which comprise living decency. The amount of food required by the man or by his family can be fixed with scientific accuracy. The amount of clothing is not susceptible of such an accurate statement but it can be designated in terms of a certain number of garments per year. Most students of the standard of living have agreed that three or four rooms are necessary to house a family of five people decently. They have, likewise, made an allowance for medical attendance, for saving, for insurance, and for recreation.

After the number of things necessary to maintain a decent standard of living has been decided upon, the question of cost is raised. A family requires so much flour, so many pairs of shoes, and so many rooms. What is the least amount for which these

things can be obtained? The answer to that question, worked out for a number of eastern cities, has placed the cost of a decent living for a family of five at from \$750 to \$1,000.¹⁰

The amount fixed by the recent standard of living studies is a minimum. One of the most complete investigations—that made by the federal government—allowed \$744 per year for the maintenance of a family of five in a Massachusetts city.¹¹ Six-sevenths of this entire amount was expended for food, clothing and shelter, leaving only a little more than \$100 a year for all of the other items in the family budget.¹²

The Chapin study was made for the purpose of determining the cost of a fair or decent standard of living in New York City. In summing up the results of his study, Dr. Chapin writes:¹³ “An income of \$900 or over probably permits the maintenance of a normal standard, at least so far as the physical man is concerned.” Regarding incomes below \$900, Dr. Chapin makes the following statement: “Whether an income between \$800 and \$900 can be made to suffice is a question to which our data do not warrant a dogmatic answer.”

One other less complete, but highly satisfactory study of standards of living has been made in the Stock Yards District of Chicago. After an exhaustive investigation, the authors report

¹⁰ *Financing the Wage-Earner's Family*, Scott Nearing, New York, B. W. Huebsch, 1911, Chapter V.

¹¹ *Woman and Child Wage-Earners in the United States*, Senate Doc. No. 645, 61st Congress, 2d Session, Washington Government Printing Office, 1911, Volume XVI, p. 244.

¹² The exact apportionment of this sum was as follows:

	<i>Expenditures</i>	
	<i>Per week</i>	<i>Per year</i>
Food.....	\$6.02	\$313.00
Housing.....	2.52	131.00
Clothing.....	2.63	136.80
Fuel and light.....	.82	42.75
Health.....	.22	11.65
Insurance.....	.35	18.25
Sundries.....	1.75	90.90
	\$14.31	\$744.35

¹³ *The Standards of Living Among Workingmen's Families in New York City*, R. C. Chapin, New York, Charities Publication Committee, 1909, p. 245.

that the minimum amount necessary to support a family of five efficiently in the Stock Yards District is \$800 per year.¹⁴

There have been several other investigations and estimates, less complete and less conclusive, which lead to the same general conclusion, namely, that in the industrial cities of the northeastern United States, the cost of a decent standard of living for a family consisting of a man, wife and three young children, varies from \$750 to \$1,000.

Are the wages paid to American wage workers sufficient to maintain health and decency? Compare the two statements:

Cost of decent Family
living in Eastern in-
dustrial cities, \$750
to \$1,000 per year

The wages of adult males
—(Allowing for unem-
ployment) 4/5 less than
\$750; 95/100 less than
\$1,000

Nothing could show more conclusively the frightful inadequacy of American wages. The present wage scale, paid to workers by American industry, does not enable millions of them to give a family of three young children the simple decencies of life that are necessary to the maintenance of health and efficiency.

IV. *The American Wage as a Business Proposition*

The wages paid by American industry to a great body of its workers are inadequate to provide health, efficiency, and decency for a moderate-sized family. They are even more inadequate when they are considered from the standpoint of up-to-date business practice.

Many a successful business man, who is confident that "the workers are paid all that they are worth," and that "wages are far too high, anyway," has never stopped to analyze wages from a strictly business point of view. The wage-earner is, in reality, a business man. His place of business is his home. The object of his business activity is the rearing of a family in good health and with a generous sprinkling of education. To this end, the worker labors during most of his adult life.

Business men have worked ardently to safeguard business interests. They have talked a great deal about the importance of

¹⁴ *Wages and Family Budgets in the Chicago Stock Yards District*, J. C. Kennedy, and others, University of Chicago Press, 1914, p. 80.

business stability; of conservatism in finance; of the returns due a man who risks his wealth in a business venture; and of the fundamental necessity of maintaining business on a sound basis. After centuries of experiment, they have evolved what they regard as a safe and sane method of financial business procedure. Every successful business man tries to live up to the following well-established formula:

First. He pays out of his total returns, or gross receipts, the ordinary costs of doing business—materials, labor, repairs, and the like. These payments are known as running expenses, or up-keep.

Second. After up-keep charges are paid, he takes the remainder, called gross income, and pays out of it the fixed charges—taxes, insurance, interest and depreciation.¹⁵

Third. The business man, having paid all of the necessary expenses of doing business (the running expenses and the fixed charges) has left a fund (net income) which, roughly speaking, is the profits of the business. Out of this net income, dividends are paid, improvements and extensions of the plant are provided for.

Fourth. The careful business man increases the stability of his business by adding something to his surplus or undivided profits.

Every modern business man disposes of the total receipts of his business in some such way as that indicated. The business man who cannot pay his running expenses, fixed charges and dividends, and show some surplus, is scanned critically. Should he fail to pay dividends, he is considered unprosperous. If he does not meet the interest on his bonds, he is taken into court and declared a bankrupt. Running expenses, fixed charges, dividends and surplus are not merely fair; they are essential to business success. They are considered a "right" by the organizers of every legitimate business.

Suppose the American working man, who is striving to support a family on a wage ranging from \$1.50 to \$4.00 a working day (\$450

¹⁵ A depreciation charge is one that is made against the wearing out of capital. A paper manufacturer buys a machine for which he pays \$1,000. Experience tells him that this machine will wear out in 10 years. Therefore the manufacturer sets aside each year, a sum which, at the end of 10 years, will equal \$1,000 (a new machine). In this way, the business man keeps his capital intact. While the individual machines, tools, and the like do wear out, the accounts of the business are so kept that these pieces of capital will be automatically replaced when they are too old for use. The depreciation charge is recognized everywhere as a legitimate and necessary fixed charge on business.

to \$1,250 per year), should apply to the financing of his family affairs, the financial formula adopted by any well-managed modern business. Since he must allow for running expenses, fixed charges, dividends and surplus, he would proceed as follows:

First. He would pay, from the total family income, the family running expenses—food, clothing, housing, medicine and the like.

Second. From the remainder, his gross income, he would take interest on the investment which has been made in bringing up and educating his wife and himself; insurance against all reasonable contingencies, such as sickness, accident, death, and unemployment; and a sum for depreciation sufficient to compensate for the inevitable decrease in his earning power, and for the old age during which he and his wife can no longer earn anything.

Third. The remaining net income should be sufficient to enable the worker to pay himself dividends proportionate to the excessive risks which he runs in bringing a family into the world and attempting to rear it; and sufficient to add at least something to the surplus which the family lays aside to provide against such untoward events as births, deaths, and prolonged sickness.

The workman who conducted his affairs on this basis would be a sound, sane, safe financier. He would also be a seven-day wonder. If the preceding section established any point, it was that a large percentage of wage-earners receive a wage which will not pay even decent running expenses. Any business man who attempted to conduct a business on a basis that would pay only the flimsiest of up-keep charges would be regarded as a subject for mental treatment, yet the bulk of American workers find themselves in exactly that predicament. They are conducting a family business on a basis that will not pay reasonable running expenses. The legitimate fixed charges of business—interest on the investment, adequate insurance, and depreciation—are far above the reach of most wage-workers who have a family of five to support. The ordinary worker's family is a bankrupt concern—it cannot meet even the interest on its bonds. And dividends? The ordinary worker is thankful if he can pay the bills incident to up-keep. Dividends are a luxury of which he does not dream.

Place before any levelheaded man of affairs this proposition: "I have a business which is barely able to pay running expenses. We can't meet our fixed charges, and our wildest flights of imagina-

tion have never carried us as far as dividends and surplus. Will you join in the venture?" The statement is grotesque, yet it sets forth the financial position of the majority of American wage-earners.

One further point should be noted. After the business man has paid running expenses and fixed charges, the remainder is income—"net income." The great mass of wage-earners who never receive enough to pay more than their bare running expenses have no "income" in the real sense of that word. They are getting mere up-keep, or subsistence.

As a business proposition, for a family of five, the ordinary American wage is absurdly inadequate. No business man would consider it. It violates every business standard which the practice of the modern man of affairs recognizes as legitimate. Every concept of modern business management cries "shame" at the very thought of the business proposition which the American wage-scale presents to millions of its workers.

V. The Anti-Social Nature of the American Wage

The health inadequacy and the business inadequacy of the American wage can be demonstrated statistically. The proof of the social inadequacy of wages rests upon more general considerations.

Society must develop a system of compensation which will stimulate industry and thrift among the people who do its work. A wage system or any other system of distributing the products of industry must be based on an adequate appreciation of this fundamental principle.

The first, and probably the most fundamental, social objection which may be raised against the present wage scale is that it fails very largely to stimulate the ambition of the worker. There are two reasons for this failure. On the one hand, the wage scale is so utterly rigid that the man doing good work is placed on the same footing with the man doing poor work; the enthusiastic worker is placed on the same basis with the indifferent worker. This holds true of piece-rate payment as well as of time-rate payment. The rule of most producing establishments is "anything that will pass the inspector." Furthermore, the individual may work as hard as he pleases, devoting all of his energy to the work in hand. Despite this, he is unable to raise his wage rate and very frequently is

unable to increase his wages. At the same time, industry is organized on such a large scale basis that the number of positions "at the top" is strictly limited. Among the employees of the American railways, for example, one in one hundred is an officer. The proportion is higher for manufacturing industries, although it is seldom that more than 10 per cent of the men employed in an established industry hold positions which involve even a moderate amount of responsibility and initiative.

The wage scale is fixed either by an agreement between the employer and the union, or by custom and common consent. No one even pretends that there is a definite relation between the values produced by the worker and the wage which he secures.

The worker is not paid in proportion to his product. Wages are never fixed on that basis, with this single exception—that no employer can afford to pay any more in wages than a group of men are producing in product. The law of monopoly, "all that the traffic will bear," is the law which fixes the American wage. An employer has a Scotchman working for him at \$3 a day. An equally efficient Lithuanian offers to do the same work for \$2. The employer is not in business for his health, and the work is given to the lowest bidder.

An employer never determines a wage by asking the question: "How much does this man produce?" Rather he asks, "What will it cost me to get another equally efficient person in his place?" It is the cost of replacement and not the values created in production which determines the wage that a man receives.

The phrase, "he gets all that he is worth," means merely this—that the employer is paying him as much as he has to pay another equally efficient person to do the same thing. Whether he is hiring bricklayers, bookkeepers, or coal heavers, the wage that he pays depends upon the supply and demand of labor. This law is excellently illustrated during a time of financial and industrial depression, when there is a surplus of labor and a dearth of opportunity for employment. Many industries at once reduce their wages because they are able to get all of the people that they want at a lower figure.

The wage contract, as it is called, knows no social morality and is based on no standard of social ethics. It is subject only to the law of supply and demand, and to the law of monopoly price. The employer pays his labor as little as he can. The worker de-

mands and gets as much as he can. Until recently, there has been no general idea that a minimum wage was a social necessity. The individual laborer bargaining with the employer made the best terms he could. If labor was scarce, he was successful; if it was a drug on the market, his wages were reduced to a starvation level.

Another consequence follows from the ruthless bargaining of the competitive labor market. The bargain takes place between the employer and a worker irrespective of social obligations. The consequences are doubly disastrous to the man with the family depending upon him. A common occupation, quarrying, for example, may be carried on by married or by single men. The employer does not even put himself to the trouble of asking whether the prospective employee is married or single, because that makes no difference if a man is handy with his tools. The man with a family is brought into active competition with the man who has no family obligations. The native-born head of a household must accept labor terms which are satisfactory to the foreign-born single man. Industry does not inquire into a worker's social obligations. It simply asks whether he is able to do the work, and at what price. The competition of the labor market does the rest.

Society demands and expects that men shall support families. The future of the state hinges upon the fulfillment of this presupposition. At the same time, the modern economic organization makes no attempt to assist the man who is bringing up a family to face the competition of the man who has no family dependent upon him.

There is no relation between the social (family) needs of a man and the wage which he receives. Wages are fixed wholly independent of social relations.

The American wage is anti-social. The present system of wage payment fails to stimulate workers to industry and thrift because it has not given them a reward in proportion to their exertions and ability. There is no relation between product and wages. Rather wages are fixed by competition and monopoly. The present wage scale fails completely to provide a return in proportion to social needs. The simplest requirements of social progress call for ambition, for justice, and for the provision of health necessities. The present American wage scale offends even these primitive social standards.

VI. The Gross Inadequacy of the American Wage

The American wage is grossly inadequate. Examined from any point of view, it fails to provide a sufficient return to the wage-earner who is carrying the burden of a young family.

American industry pays to the overwhelming majority of wage-earners, a wage of less than \$1,000 a year. Even where no allowance is made for unemployment, the wage rates of three-quarters of the men fall below \$750 a year. Perhaps three wage-earners in each hundred are paid over \$25 per week (a yearly rate of \$1,300). Compared with the sums which are met with in the business world, the wage of the workers is small.

The wage rates paid by industry, placed side by side with the cost of family health and decency, reveal an appalling situation. In great numbers of cases, the wages paid by industry to its adult male workers are insufficient to provide for the health and decency of a moderate-sized family.

American wages, as a business proposition, are even less adequate than they are for the provision of health and decency. The ordinary principles of sound American business practice are all violated in the financing of the worker's family.

There are certain well-recognized principles of social expediency: that industry shall pay a wage that will maintain the efficiency of its workers; that wages must prevent poverty and dependence; and that families must be able to live as self-respecting units in the community. These principles underlie the sane conduct of society. Each of them is violated by the present American wage scale.

American wages are inadequate, grossly inadequate, when viewed from any point of vantage afforded by the available social facts. In a small percentage of the cases, and for individual families, this is not true. Speaking generally, however, and in terms of family living, the present American wage scale is pathetically, grotesquely, viciously inadequate.

INDUSTRIAL OUTPUT AND SOCIAL EFFICIENCY

BY CHARLES ERVIN REITZEL,

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Industrial efficiency has been defined as a maximum of output with a minimum of outlay and effort. To this standard the progressive employer has been so fully converted during the last decade that back-sliding into slipshod methods of production need little be feared. Industry has learned well its scientific lesson on reducing costs. Meanwhile, however, with a zeal almost religious, labor has organized and become united so as to bring into its activities stringent demands for better working conditions and higher wages. Herein, then, we see a basis of conflict. The employer in his efforts to obtain, through so-called efficiency, a lower cost per unit of production, must of necessity condemn, and combat vigorously, programs which make for higher returns to employees. In contrast, labor in order to realize its goal, must push upwards its sources of economic welfare—higher wages and steadier work. This “cutting-down” process on one side opposed to this “pushing-up” process on the other must in the final outcome lead not to efficiency but to inefficiency, not to a maximum of output but to a minimum of output. Conflict results in a curtailing not a creating of product.

But more important! The enlightened laborer is beginning to see, and see clearly, that as a member of an economic class it is to his direct advantage to handicap production. Why should he hurry through a job only to find himself jobless? When a group of workers in California a month ago saw that, with the tin binding straps cut, it required twenty times the amount of work to unload shingles than would otherwise have been necessary, behold, by some unknown mysterious power the binding straps were cut. It meant more work and more work was what they wanted. The bricklayers from their unionist standpoint are justified when they agree to lay eight hundred bricks per day in lieu of a possible two thousand. Such regulations are intended to give steady employment.

There is this conscious aversion on the part of labor to unemployment in all lines of industry. In the 1912 investigation into

the irregularity of employment in the steel industry, the workers objected more strongly to enforced idleness than to any other evil. Quoting from the report:

There was no complaint so frequently made or so strongly expressed as that regarding unemployment. There were many points on which the workmen did not agree; many complained of low wages, others felt they were being paid at a fair rate; but in all parts of the country in all occupations practically all the workmen considered questions affecting hours of labor and rates of wages less important than the constant recurring periods of unemployment, and the uncertainty which attended work at all times.¹

Such views are to be expected. It is most difficult for a workman to associate the idea of increased output with the idea of personal benefit; but the connection is close between retarded work and continuous employment. Let us be honest and admit that the worker from his point of view is right. Work first! The amount of output is of secondary consideration.

Capital likewise is guilty of the same malefficiency. But again we must see justifications. Why grind out product only to find a lowering of prices? After a certain point has been reached, an increase in the volume of output is bound to lessen its unit value. In 1905-6 it will be recalled that the cotton acreage had fallen off 3,900,000 acres as compared with the previous year. This result has been directly attributed to the actions of the Southern Cotton Association and the Farmers Union, who were determined to raise the price to fifteen cents.² Like curtailments of tobacco, lumber, vegetables and fruit, in fact, in all lines of production are matters of common knowledge and experience. With capitalistic concentration comes a corresponding increase of price advantage through the checking of output.

To those interested in social welfare, both this industrial class conflict and this willful limitation of output by both labor and capital, are of vital importance. But of still greater import is the idle capacity becoming more and more tied up on account of such situations. Consider the result. As more and more capital and labor become stagnated the higher must be the costs to the consumer and the worse the spirit of unrest in our social order. Carried to its

¹ United States Report—*Conditions of Employment in the Iron and Steel Industry*, Vol. 111, p. 205.

² *Report of Commissioner of Corporations on Cotton Exchanges*, Part V, p. 342.

natural conclusion we see that it must lead to a complete stagnation in our industrial system. As labor becomes further awakened and establishes a consciousness of its own interests, just so must come defying demands which will hinder and curtail the productive processes. And with the monopolistic growth of capital the more will be its tendency to juggle output so as to enhance prices. Viewing it as the consuming public must, the whole system is becoming cumbersome, chaotic and unworkable. There is no greater condemnation of modern industry than the travesty of an able competent *idle* worker standing beside a huge magnificent *idle* plant. Here is social inefficiency raised to the n^{th} power. We shall have made great strides in social progress when we admit that such an industrial situation is essentially anarchistic.

A complete measurement of this enormous waste due to idle capacity is well nigh impossible. However, sufficient data are available to show in a measure the ratio between the full capacity of industry and its actual operation. If we here can but obtain an intelligent interest in the problem of this wasted capacity, then we have gone far in seeing the importance of obtaining more complete data on the question.

An illuminating New Jersey report³ for 1912 gives us a fact portrayal of at least one state. Here is shown the relation between "full capacity" and "actual operation" not only for all industry but for each specific kind of manufacturing. The exact "purpose of this investigation," to quote from the report, "is to show how nearly the actual operation of industry during the year approached its full productive capacity. The 'proportion of business done,' as reported by the establishments considered, represents their actual output of goods for the year, compared with what it might be if all the existing facilities of the plant had been brought into use." What do the facts show?

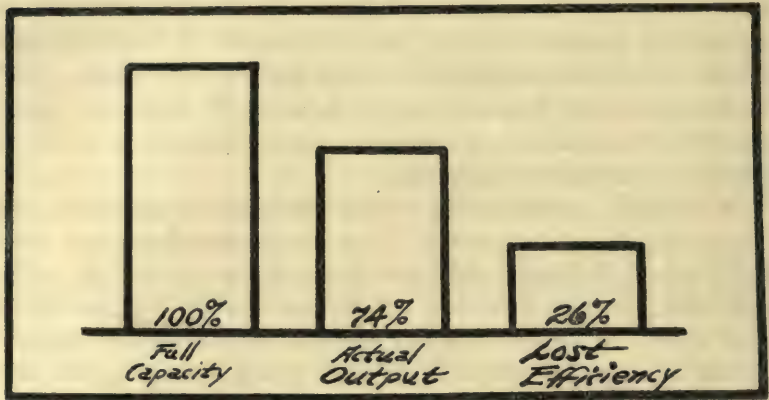
During the year, 2,556 establishments with invested capital amounting to \$849,000,000 and a labor supply of 323,400 employees, created \$1,050,000,000 worth of goods. Deducting Sundays and holidays, the report considered 306 working days as a "full capacity" year. On this basis the aggregate proportion of business done

³ *The thirty-sixth Annual Report of The Bureau of Statistics of Labor and Industry, 1913.*

is shown to be 74 per cent; or 26 per cent below the full productive capacity. In terms of output then, we have:

Possible output.....	\$1,413,000,000
Actual output.....	1,050,000,000
Lost output.....	\$ 363,000,000

The same represented by graph would appear as follows:



To the capitalist this 26 per cent "lost efficiency" looms up as a greater possible return on money invested—shall we say, an additional two or three per cent. To the wage-earner it is a life and death proposition. Without any change whatsoever in the ratio of economic distribution, the additional returns that would result to the worker if the industries were running "full capacity" are sufficient to pull the average wage-earner quite a distance away from the pangs of poverty.

Considering the wage-earner in two of the largest industries of the state—the machine industry and the silk industry—which employ 21,194 and 15,775 workers, respectively, we can show clearly his "full time" wage in contrast with his "actual wage." In these industries the operation was in both cases slightly over 70 per cent of their "full capacity." The average wage actually received in the machine industry for the year was \$684; in the silk industry, \$509. The possible "full time" wages were \$977 for the machine worker and \$726 for the silk employee. Charted as follows we have:



Massachusetts also gives us some enlightening material in its twenty-sixth annual report.⁴ But the results are so similar to those of New Jersey that a portrayal would but tend to repetition.

A very thorough investigation which brings out our problem in another light is found in the Iron and Steel Industry Report on Employment.⁵ The investigation took place in 1910, when the production of iron and steel was greater than any preceding year. However, "constant complaints were heard from all classes of employees, skilled and unskilled, native and foreign, about the irregularity and terrible uncertainty that accompanied steel production."⁶ It appears the policy of the steel industry," continues the report, "is to operate to its fullest capacity during active demand, then during a decline in the market, shut down completely and wait an accumulation of orders or the development of better prices"⁷—a vicious policy from the standpoint of the wage-earners. As a

⁴ *Twenty-sixth Annual Report on the Statistics of Manufactures, Massachusetts, 1911.*

⁵ *Report on the Conditions of Employment in the Iron and Steel Industry in the United States, Vol. III, Ch. VII, 1910.*

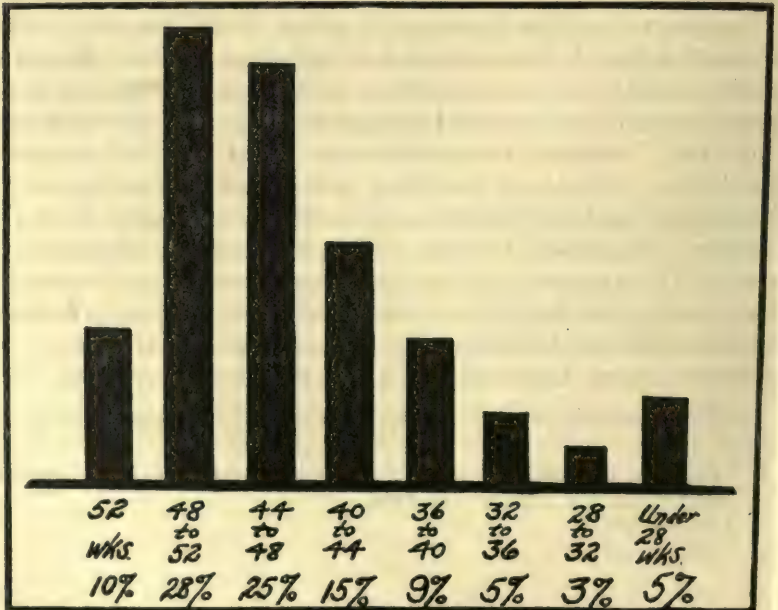
⁶ *Ibid.*, p. 206.

⁷ *Ibid.*, p. 207.

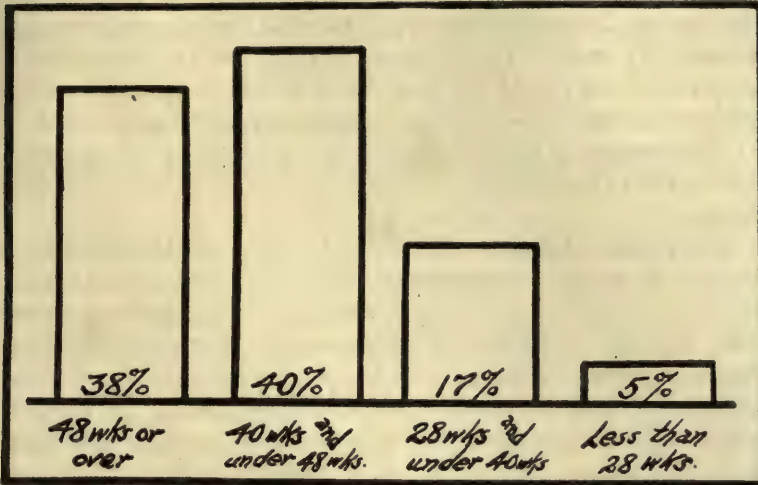
basis of study over one hundred plants with 90,757 employees were covered—the report taking into consideration the five principal departments of steel production,—namely, blastfurnaces, open hearths, bessemers, hand and mechanical rolling mills. A time unit of operation for each department was established. Then the ratio between the number of units of “actual operation” and the number of units of “full capacity” were compiled. Totaling the results of the five departments, we have:

Number of weeks in operation	No. and percentage of employees in each period	
	Number	Per cent
Under 28 weeks	4,906	5.4
28 to 32 weeks	2,287	2.5
32 to 36 weeks	4,168	4.5
36 to 40 weeks	8,559	9.4
40 to 44 weeks	13,648	15.3
44 to 48 weeks	23,015	25.4
48 to 52 weeks	25,262	27.7
52 weeks	8,912	9.8
Totals	90,757	100

Diagrammed according to the percentages of employees working, it appears as follows:



Or, when placed on a basis of plant operation, we have:



Such statistics, however, do not make the appeal that personal experience does. As a boy reared in a steel-town under the black shadows and the dirty smoke of blast furnaces, I remember well the shattered hopes, the fears and the disappointments of the thousands of steel workers caused by irregular employment. What a gloom came over the inhabitants when the report went abroad, "The rail mill is to be shut down," or "The blast furnaces are to be 'out' for a year." This meant less "smoke and dirt," but it also meant less income to the workers who were ever ignorant as to the time such misfortune would fall upon them. Is it any wonder that they are becoming more dissatisfied, restless and disturbing? I should be greatly surprised, taking all things into consideration, if they acted otherwise.

It is natural to expect that blame of some sort will be placed upon capital and labor for this idle capacity and unemployment. But as the situation develops we are placing less blame on either side and are beginning to see that the evil is inherent in a system of industry run primarily for profit. And seeing this, we must look for changes in the system and methods of industry rather than to bitter criticisms of capital and labor, if we wish industrial progress. No! It will not do to attribute the great loss of output to strikes, lockouts

or other troublesome tendencies. These factors focus national attention and often center cruel blame, but the actual loss sustained by strikes, etc., in comparison with the total loss of possible output, is exceedingly small. For instance, in 1912, the New Jersey reports show a loss of less than 1 per cent due to strikes in proportion to the total loss through non-operation.⁸ A system of industry which has the establishment of price as its chief aim is bound to curtail output, far more than the occasional disturbance due to troublesome wage-earners.

What great changes must be made, what constructive policies advanced, in order to secure social efficiency! Two great trends in society today show developments which are bringing about a desire on the part of capital and labor to create a maximum of output. First, the growing tendency that the worker must be more than a wage-earner—that he must become a part sharer in industry. Secondly, the greater government control and government regulation of the means of production which must result in an operation of industry for use rather than for profit. At present, to the workingman the distance is great between increased output and a corresponding increase in wages. He can see no connection between the two—and rightly so, for experience has taught him otherwise. But just so soon as he becomes a direct sharer in the output as a part owner of the business, it changes everything. His interests become coupled with the business, not bulwarked against it. The padlocks of antagonism are broken. So also with capital; the more industry is looked upon as a social institution operated for the needs of the people, the more will intentional checks and limitations be condemned and prohibited. Employers, employees and the public are entering an era of social consciousness—an era characterized by justice for all. Social efficiency demands it!

⁸ *Thirty-sixth Annual Report of Labor and Industries of New Jersey 1913*, p. 310.

THE THEORIES ADVANCED IN EXPLANATION OF ECONOMIC CRISES

BY E. M. PATTERSON, PH.D.,

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A definition of an economic "crisis" is, like most other definitions, very difficult to construct. By way of introduction we shall quote a few chosen somewhat at random. Adolph Wagner, the German economist, expresses his idea by saying: "Crises imply . . . the overwhelming and simultaneous occurrence of inability on the part of independent entrepreneurs to pay their debts." This is similar to the statement of John Stuart Mill: "There is said to be a commercial crisis when a great number of merchants and traders at once either have, or apprehend that they shall have, a difficulty in meeting their engagements." Professor E. D. Jones says: "A crisis is the sudden application of a critical conservatism to business transactions, leading to such a demand for liquidation as to cause a widespread inability among business men to meet their obligations." Senator Theodore E. Burton states: "The word crisis, if employed with entire accuracy, describes a period of acute disturbance in the business world, the prevailing features of which are the breakdown of credit and prices and the destruction of confidence. It has especially to do with the relations of debtor and creditor."

None of these definitions gives so clear an idea as does a brief description. Probably no one has ever pictured the crisis and the associated events more effectively than did Frederick Engels in his little volume *Socialism: Utopian and Scientific*.

As a matter of fact, since 1825, when the first general crisis broke out, the whole industrial and commercial world, production and exchange among all civilized peoples and their more or less barbaric hangers-on, are thrown out of joint about once every ten years. Commerce is at a standstill, the markets are glutted, products accumulate, as multitudinous as they are unsaleable, hard cash disappears, credit vanishes, factories are closed, the mass of the workers are in want of the means of subsistence, because they have produced too much of the means of subsistence; bankruptcy follows upon bankruptcy, execution upon execution. The stagnation lasts for years; productive forces and products are wasted and destroyed wholesale, until the accumulated mass of commodities finally

filter off, more or less depreciated in value, until production and exchange gradually begin to move again. Little by little the pace quickens. It becomes a trot. The industrial trot breaks into a canter, the canter in turn grows into the headlong gallop of a perfect steeplechase of industry, commercial credit, and speculation, which finally, after breakneck leaps, ends where it began—in the ditch of a crisis. And so over and over again.

Perhaps even this vivid word picture will be less impressive to some than a few facts as to the serious effects of the crisis and the depression that follows it. Professor Wesley C. Mitchell in his recent volume entitled *Business Cycles* has recorded the significant features of the crisis of 1907 in England and the United States and the following points have been taken from his account. By the middle of the summer evidences of difficulty had begun to appear in England. British railway stocks had fallen off in price; the ship-building yards had few new contracts; costs of production had become so great that many manufacturers were refusing to take new business at the ruling quotations; the building trades were dull; the ratio of net to gross railway receipts declined; commodity prices began to drop; bank clearings fell off; imports gained less rapidly; and the percentage of trade union members unemployed rose from 2.8 per cent at the end of April to 3.6 per cent by the close of August. These difficulties came to a climax in the latter half of the year, being intensified by the crash in the United States. The bank rate of the bank of England rose from $4\frac{1}{2}$ to 7 per cent, where it remained for nearly two months. During this period the market rate averaged from $5\frac{1}{2}$ to $6\frac{1}{2}$ per cent. Imports and exports showed smaller and smaller increases over the preceding year and in the early months of 1908 began to decline; clearings fell off sharply and trade union unemployment increased to nearly 10 per cent during the latter months of 1908.

In the United States where the crisis degenerated into a panic, conditions were much worse. In advance of the actual outbreak of the panic there was for months evidence of a tension in the investment market. Copper especially fell in price and was followed by copper stocks. This precipitated difficulty among a group of banks that were more or less closely identified with the copper interests. Runs were started and a number of banks were forced to suspend payments. A scramble for cash followed, spreading from New York throughout the United States and accompanied by very serious

consequences. Among the worst of the effects were a premium on currency which rose at one time as high as 4 per cent; the necessity of introducing numerous substitutes for cash; a demoralization of the domestic and foreign exchange markets that caused heavy losses both to bankers and to business men while the amount and the prices of securities dealt in on the stock exchanges seriously declined. During November and December currency was at a premium of from $\frac{1}{8}$ to 4 per cent. Call loan rates were erratic, going as high as 125 per cent in the latter part of October and fluctuating between 5 and 25 per cent as late as during the latter half of December. During November there was a decline in the amount of time loans and the quoted rates ranged from 6 to 7 per cent in October, 12 to 16 per cent in November and 8 to 12 per cent in December. Worse still was the stoppage of business by those enterprises that could not pay the high rates and could make no special arrangements to secure lower ones. Business failures in the United States which had been as low as 161 in the last week of 1906 were 300 for the week ending December 19, 1907, and 435 for the week ending January 9, 1908. In the second quarter of 1907 there were 2,471 and for the first quarter of 1908 there were 4,909.

These derangements of business would seem to be of interest primarily to the bankers and brokers or to the large borrowers—to the capitalist class. The counterpart of the picture is to be found in the effect of the crisis upon the man of small means and upon the poor. Inability to borrow may mean considerable inconvenience or even financial ruin for the man of large affairs but it does not usually mean actual suffering. Nevertheless his failure to secure funds and the necessity of selling his securities or commodities at a low price may force him to close his factory, to delay extensions or at least to curtail operations. He receives fewer orders for goods and as a result buys smaller amounts of raw materials and lessens his own output.

This means reductions of wages and discharge of workmen. Some writers have urged that the workingman receives a fixed wage and does not assume industrial risks which are borne by the capitalist or entrepreneur. Such a statement is fallacious. The employee participates in the risks of modern industry and suffers from a business derangement far more severely than his employer. The capitalist secures less profits but with his accumulated savings ordi-

narily endures no real privation while large numbers of the workers with little or no savings face actual hunger or starvation. Demands upon charitable organizations increase, bread lines grow longer and suffering becomes widespread and intense until the crisis and the ensuing depression are over.

This brief enumeration is sufficient to make clear the seriousness of crises and to explain why so many attempts have been made to determine their causes and to devise methods for alleviating or preventing them. Few, if any, efforts at a logical explanation were made prior to the nineteenth century. The dislocations of business that occurred with more or less frequency in the centuries preceding brought with them less serious consequences and their effects were less widespread than has been true during the last one hundred years. The introduction of machinery, the development of a world market, a wage system, the complexity of modern finance and, in general, the close interdependence of all countries and individuals during and since the industrial revolution are the reasons for this.

Explanations of crises may be divided conveniently into two general groups. The first includes those which find that each disturbance is due to some special cause. Modern industry is viewed as in a state of stable equilibrium. This condition is "normal" and tends to continue, but numerous influences, which are for the most part unpredictable, are apt to disturb it and bring about an "abnormal" situation. Crises thus have little or nothing in common except their abnormality. They are pathological phenomena and each has its special, unpredictable cause. When the cause has been removed or when the industrial structure has become adjusted to its presence, disturbances disappear and a state of normality again exists.

If this is the correct explanation it is evident that there is no possible limit to the number of causes of crises. Any change in the relative importance of the almost countless forces that are always operating in our economic life or the appearance of any new influence may completely upset the delicate adjustments of our industrial machinery and precipitate disaster.

Among economists the leading exponent of this theory is Wilhelm Roscher. Another writer, Max Wirth, enumerates as the list of causes that produce crises: "(1) harvest failures; (2) discovery of new deposits of coal, metals—particularly of the precious metals;

(3) inventions; (4) opening or closing of commercial routes and of markets; (5) war and revolutions; and (6) leading to depression of trade, the depreciation of the currency.”¹

An interesting collection of special causes of depressions is to be found in the first annual report of the United States commissioner of labor. These were elicited through inquiries by congressional committees and gathered by agents of the bureau of labor. Expansion of credit, contraction of currency, underconsumption, uneven production and others suggest the view that the causes of depressions persist or recur but still others very distinctly suggest the sporadic. Of the latter group there may be mentioned land grants to corporations, free passes, the repeal of the income tax, the faulty collection of revenue, and the introduction of Bessemer steel.

Two comments on this method of accounting for crises seem appropriate. First, it is to be observed that it overlooks or chooses to ignore a certain regularity in the appearance of crises—a regularity that may be significant and call for explanation. In the second place, such an interpretation is discouraging. If the causes are irregular, prediction of crises becomes difficult, if not entirely out of the question. If they cannot be foreseen, prevention is impossible and we have no recourse but to await their appearance and then merely do our best to alleviate their disastrous consequences.

To others, and in fact to most writers in recent years, there seems to be a distinct uniformity in the intervals between crises and in certain of the accompanying phenomena. This has led to the suggestion that there may perhaps be formulated a law of their periodicity. It is said that crises tend to recur and that prosperity, crisis, and depression succeed each other with such regularity as to warrant the use of the word “cycle.”

Explanations of this second sort may be called cycle theories and may be divided into three classes. These classes are by no means mutually exclusive but represent differences of emphasis rather than entirely distinct opinions. First are those which find the explanation in the human mind. The ebb and flow of business is due to psychological causes. Second are the theories that find a regularity of recurrence in the operation of some of the forces of nature which determine the crop yield and thus affect values. Third and last in our classification are the theories that place their em-

¹ Quoted from *Economic Crises* by E. D. Jones, p. 23.

phasis upon the structure of our modern economic life. The description of a business cycle quoted above from the writings of Frederick Engels is an illustration of this type of theory.

We may refer to the first of these three classes of theories as psychological. One of the earliest writers to emphasize the importance of mental action was John Mills who declared (in 1867): "The subject of commercial fluctuations will acquire a new dignity if it be found striking its roots far below the level of its physical particulars, and proving itself cognate with the sciences of the mind." Yves Guyot, Horace White and others have in varying degrees stressed the importance of these psychical factors.

This point of view has been carefully analyzed by Professor Jones, who does not, however, stress it unduly in his discussion. The dominance of the impulse to secure wealth distorts recollection, modifying original impressions, repressing unpleasant experiences and removing the correctives that might otherwise control conduct. The optimistic become leaders and through undue concentration of interest and the consequent effect upon the emotions, errors of practice are promoted. This is the more certain to occur since belief tends to stimulate action and since the beliefs and actions of one individual or group are reflected and copied by others. Mistakes are, however, bound to occur. Erroneous beliefs are spread as well as correct ones. Errors rapidly accumulate, increasing in their intensity and consequent effects. Sympathy, as an influence distinct from intellectual conviction, encourages a rapid spread of optimism. Being unintelligent "it makes for the support of opinions dangerous to the stability of industry. An undue concentration of interest resulting in intense emotion is always prejudicial to sound reasoning."

This excessive optimism leads to engagements and contracts whose fulfillment is beyond the power of their makers. A realization of this appears here and there, producing uncertainty. Actual inability to keep agreements and to make payments when due soon occurs and the uncertainty spreads. Doubt and hesitation extend their influence in the same manner and with the same rapidity as did optimism in the earlier phase of the cycle. Economies become necessary and expenditures are curtailed, thus aggravating the difficulty. Even if an actual panic is avoided, discouragement and depression appear. Pessimism regarding the immediate future is

the dominant attitude of mind and disappears slowly, perhaps not for some months or years.

The second class of cycle theories find the explanation of crises in certain periodical changes in the operation of natural forces. This point of view may be made clear by summarizing the conclusions of two writers. Writing in 1878, W. Stanley Jevons, the well known English economist, referred to the theory of John Mills (which we have already mentioned) by saying: "I can see no reason why the human mind, in its own spontaneous action, should select a period of just 10.44 years to vary in. Surely we must go beyond the mind to its industrial environment." Professor Jevons investigated carefully the crises during the eighteenth and nineteenth centuries and concluded that there had been an exact regularity in their appearance. He also observed that the latest available study of the sun-spot period, that of Mr. J. A. Broun, showed an interval of 10.45 years between them. This close correspondence led to the suggestion of a connection between the two phenomena and the famous "sun-spot and harvest" theory was the result. Elaborate investigations led to the conviction that a greater number of sun-spots at any given time is an evidence of greater solar activity and consequently a greater radiation of heat, the effect of which will be felt upon the earth. When the spots are fewer in number, less heat is radiated and the weather will be cold, cloudy and damp, resulting in poor crops and high prices. Alternation of these conditions produces regular fluctuations in commercial activities.

A perusal of the essays of Professor Jevons indicates the wide extent of his research but a question quickly arises when one encounters his statement: "I am free to confess that in this search I have been thoroughly biased in favor of a theory, and that the evidence which I have so far found would have no weight, if standing by itself." Aside from this, it may be pointed out that there are several difficulties with it, at least as stated by its author. Students of crises by no means agree that there is always an interval of 10.44 years between crises and there is much difference of opinion among scientists regarding sun-spots and their influence on climates and crops. On this President A. T. Hadley has written: "The Civil War in the United States quite broke up the regular ten-year round of crises, and, as it did not have any appreciable effect on

the sun-spots, it may be said to have broken up the theory also."

The second of the writers in this class whose views we shall summarize is Professor Henry L. Moore whose volume entitled *Economic Cycles: Their Law and Cause* has recently appeared. To Professor Moore the fundamental problem of economic dynamics is to formulate the law governing the "ebb and flow of economic life" which is "the most general and characteristic phenomenon of a changing society." The motto of the department of agriculture of the United States—"Agriculture is the foundation of manufacture and commerce"—is significant and that the farmer is at the mercy of the weather is proverbial. There may be such a close connection between the weather, the crops and crises that we shall be able to find in weather changes the cause of crises.

An examination of all the numerous factors involved in the problem would be a stupendous task and Professor Moore limits himself to a consideration of a selected few. "The variation in the quantity of the rainfall is one of the weather changes known to have a marked effect upon the yield of the crops." Hence the inquiry is directed to an examination of the "appropriate data with reference to three things: (1) the periodicity of rainfall; (2) the effect of rainfall on the crops; (3) the relation of the yield of the crops to economic cycles." The study is a statistical one conducted with the greatest of care to avoid error and the conclusions are deserving of the most careful consideration. All generalizations are made carefully and used cautiously with a full realization that a limited area—the upper Mississippi Valley—has been used and a period of only seventy-two years surveyed. Of the numerous climatic factors only rainfall has been examined.

Remembering that these limitations are fully realized we may state the conclusions in Professor Moore's own words: "The fundamental, persistent cause of the cycles in the yield of the crops is the cyclical movement in the weather conditions represented by the rhythmically changing amount of rainfall; the cyclical movement in the yield of the crops is the fundamental, persistent cause of economic cycles." This should be supplemented with a statement of the law that has been sought and which may be formulated thus:

The weather conditions represented by the rainfall in the central part of the United States, and probably in other continental areas, pass through cycles of

approximately thirty-three years and eight years in duration, causing like cycles in the yield per acre of the crops; these cycles of crops constitute the natural, material current which drags upon its surface the lagging, rhythmically changing values and prices with which the economist is more immediately concerned.

Without discussing any other theories of this second class we may now turn our attention to the third. In this the writers are numerous and we shall be compelled to limit ourselves to a few and consider them typical. Their theories are characterized by an emphasis on the interdependence of modern economic life and the complexity of business organization. The significance of human psychology is not denied but acknowledged more or less specifically. Under modern conditions, however, these mental traits have a broad opportunity to exercise their influence and the disaster that results is widespread. Each individual is dependent upon others and in a similar manner the welfare of each community and each nation is dependent upon that of every other. Difficulties arising from any cause spread rapidly in all directions. The specific occurrence that precipitates the disaster may be different in each case but the underlying cause is the unstable equilibrium of our economic life.

Since we must limit ourselves to a discussion of only a few of these theories we shall choose four, representing somewhat widely separated groups: John Stuart Mill, chosen because of his position of leadership among the classical economists; the socialist theory as a radical protest against classicism; the views of George H. Hull, who writes as a business man; and the explanations presented by a modern economist, Professor Wesley C. Mitchell, whose comprehensive study entitled *Business Cycles* is one of the latest important contributions to our knowledge of the topic.

Malthus, Chalmers and Sismondi had contended that crises were due to a general oversupply or glut of goods. To this Mill objected, alleging that such a condition is impossible. When it is said that supply may outrun demand either one of two elements may be in the mind of the speaker—the desire to possess or the means of purchase. The latter supposition is necessarily incorrect.

Each person's means of paying for the productions of other people consists of those which he himself possesses. All sellers are inevitably, and by the meaning of the word, buyers. Could we suddenly double the productive powers of

the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power.

There is thus always present the means of purchase but it may be that those who have the means of purchase do not desire to secure other goods or perhaps desire to secure goods of a kind not available. Or it may be that those who have a very intense desire to purchase do not possess any goods at all. "Those who have the means, may not have the wants, and those who have the wants may be without the means." In the aggregate there has not been an over-production of goods but merely a misdirected or ill assorted production.

General over-production of goods is thus impossible. There may be, however, an under-supply of money. In times of crisis, the annihilation of credit may cause everybody to desire money, hesitate to part with it or be willing to procure it at almost any sacrifice. The remedy is not a curtailment of production and a consequent diminution in the supply of goods but a restoration of confidence. There may be a partial glut of goods but no general over-supply. These partial gluts may temporarily become general because of a collapse of credit. Fearing an inability to meet their engagements, merchants and traders curtail their accommodations to others. The crisis is due to the contraction of credit which may have been precipitated by excessive speculation, by the withdrawal of capital from one market for investment in another, or by some other influence.

Marxian socialism has found in the crisis the most acute evidence of the inherent contradictions in our capitalistic order. Everywhere in our industrial life there are antagonisms. All history is a struggle between opposing classes, master contending against slave, patrician against plebeian, capitalist against laborer. There is a contradiction between socialized production and individual appropriation, between socialized production in the workshop and anarchistic production in society generally.

Reverting to the views of Mill's predecessors, Marx and Engels find that over-production is the cause of crises. Thus in the *Communist Manifesto* we find: "In these crises there breaks out an epidemic that in all earlier epochs would have seemed an absurdity—the epidemic of over-production." Also in the description of a crisis by Engels, as we have given it above, are the words, "The mass of the workers are in want of the means of subsistence, because they

have produced too much of the means of subsistence,"—another contradiction in our social order.

In the production of commodities the workers work socially for social objects. They coöperate with each other and with the capitalist to produce for social consumption. This product should be a social product but is appropriated by an individual, the capitalist employer, for his own advantage—the realization of his profits. The value of these goods is the amount of labor time socially necessary for their production but the capitalist is able through his advantageous position to secure the services of labor for much less and to appropriate the difference. Labor has the power and the sole power to create value but receives in return much less than it creates.

The demand for goods, however, is the purchasing power of the laborers or producers. Since there is given to them continually an amount less than they produce there is bound to be an ever increasing difference between the goods produced and the purchasing power of labor, or the demand for goods. This is increased by the fact that production is not socially directed. Each capitalist in the competitive régime seeks his own profit and produces largely without reference to the plans of others. Production in general is thus undirected, anarchistic. Commodities rapidly accumulate in excess of any possible demand for them. Production must then be curtailed with resulting loss to capital and unemployment and distress to labor. As a result "the times of greatest distress for the mass of the people now are the times when there is a complete glut of the commodities which they need and which they make."

George H. Hull is an American business man who has become interested in crises through his daily experience with industrial problems and who has published his conclusions in a volume entitled *Industrial Depressions*. Mr. Hull takes the view that crises, or rather depressions, are an old problem but that the modern industrial depression is a new malady. Some modern depressions are due to causes that have been generally recognized such as "war, pestilence, famine, bad legislation, political upheavals, and other great calamities," but in recent years a situation has developed which has not hitherto been correctly diagnosed and understood. This particular class of depressions, and not all classes, are then analyzed.

The demand for certain classes of goods is incapable of much fluctuation because they are necessities. Fluctuations do occur in agriculture, commerce and finance but within quite narrow limits. Also construction work is quite constantly demanded to an amount necessary for maintenance, replacements and such extensions as are made necessary by the growth of population. There is, however, a certain amount of construction that may be called "extra" or "optional" or "investment construction." Investment construction is undertaken only when the investor sees in it the prospect of liberal profit. In a time of low prices far-seeing investors enter into contracts for a large amount of construction work. Their lead is followed by others and the resulting demand for construction materials creates a boom in the industries immediately affected. Of these, iron and steel are the most important.

In a short time contractors discover that they are obligated in excess of their capacity. Labor and materials cannot be secured on terms that make possible the fulfillment of agreements on contract time and as rapidly as this is realized wages and prices rise. Again the far-seeing ones take the lead, this time by ceasing to enter into fresh agreements. Plans for extension are deferred and those lines of business that furnish construction materials such as iron, steel, cement and lumber, face a falling off in the demand for their products. Laborers on construction enterprises also face shorter hours, reduction in wages or dismissal. A large volume of contracts brought on the period of prosperity and now the reduction in their volume brings depression. Prices and wages fall until the possibility of large profits is again tempting and a new cycle is started. We may quote Mr. Hull as follows for a brief summary of his view:

We recognize the due influence of everything which tends to increase or decrease the volume of the industries. We claim, however, that after a country has become chiefly manufacturing, no combination of favorable influences has been strong enough to develop a boom, except on low prices of construction, and that after abnormally high prices develop, no combination of favorable influences has been strong enough to keep the boom going beyond the time necessary to complete the volume of extra construction made up of old, low-priced contracts.

The remedy needed is described thus:

The remedy we suggest is the inauguration by the national government of a system for collecting and publishing monthly all pertinent information in relation to the existing volume of construction under contract for future months, and all

pertinent information in relation to the capacity of the country to produce construction materials to meet the total demand thus indicated.

We may now turn to the fourth illustration of this particular class of theories. Professor Wesley C. Mitchell's work called *Business Cycles* is the most voluminous and painstaking analysis that has appeared for some time. Professor Mitchell finds that crises have no regular period of recurrence, that business cycles do not always pass without interruption through the same round of prosperity, crisis and depression, that there are many variations in intensity and that no two periods show exactly the same combinations of elements. There are diversities due to influences arising from other than business sources, among which are the weather, earthquakes, war, epidemics and tariff changes.

A correct explanation of the persistent, recurring causes, however, must rest upon a recognition of the fact that "the industrial process of making and the commercial process of distributing goods are thoroughly subordinated to the business process of making money." Business activity passes through cycles. Starting with the period of depression we find a relatively low level of prices, reductions in business costs, narrow margins of profits, moderate stocks of goods, cautious buying and business conservatism. Accumulated stocks of goods, however, are finally exhausted. Demand gradually revives encouraged by the continued growth of population, new tastes among consumers and new methods among producers. Most important of all there is a revival in the investment demand for industrial equipment. Low rates of interest encourage borrowing, contracts may be let to advantage and capitalists become less timid as memories of the crisis grow less distinct.

Expansion in certain active trades or in a certain section or sections creates a demand for materials that must be purchased "from other enterprises, the latter from others, and so on without assignable limits." Family incomes expand, consumers' demands increase and "soon or late this expansion of orders reaches back to the enterprises from which the impetus to greater activity was first received, and then this whole complicated series of reactions begins afresh at a higher pitch of intensity." Optimism spreads and the expansion is still further encouraged.

Those enterprises whose order books are well filled stand out for higher prices on new orders, even in highly competitive lines,

since beyond a certain point more business can be handled only after heavy investments in new equipment. Some prices however rise more rapidly than others, retail prices lagging behind wholesale, consumers' goods behind producers' goods, etc. Wages rise less than wholesale prices and stocks more rapidly than commodities. The growing physical volume of sales combined with these variations in price fluctuation result in larger profits and in the presence of growing business optimism there is a marked expansion of investments. Prosperity becomes intense.

But this prosperity breeds a crisis. Business costs increase because of the heavy expense of adding to equipment or of bringing antiquated properties back into use. Wage payments increase in standard rate and because of the higher cost of overtime. Overtime brings weariness and labor efficiency declines. Numerous small wastes are multiplied in the hurry to bill orders. There is also an increasing tension in the investment and money markets which adds to costs and lowers profits because of the higher interest rate and because many enterprises must be abandoned.

To offset these encroachments of costs upon profits, selling prices must, if possible, be raised still further. In certain lines of business, however, this cannot easily be done. Demand for new goods, especially at higher prices, cannot be stimulated sufficiently to prevent a loss. Sharp contrasts thus develop. A growing number of enterprises face declining profits. Worse than the necessity of passing dividends is the appearance of doubt concerning outstanding credits. Business credit is based primarily upon the capitalized value of present and prospective profits. Cautious creditors refuse renewals and press for settlement of accounts.

Desire to secure profits soon becomes subordinated to the necessity of maintaining solvency. Financial resources are conserved. Outstanding liabilities are provided for and efforts to push sales are checked. The volume of orders lessens, expansion gives way to contraction, and discount rates rise. The crisis is on and may or may not degenerate into a panic. A period of depression follows and another business cycle is soon under way.

This paper aims merely to present a few of the leading theories of crises, those reviewed being the ones that appear to the writer most typical and most valid. In recent years many new explanations have been offered but a review of more of them is impracticable.

The reader who is interested will find a valuable summary of the most recent in Mitchell's *Business Cycles*. In conclusion we may merely observe that many theories are obviously presented to defend some of the other views of their advocates. The connection of the socialist theory with the socialistic idea of value is an obvious one. It may also be true that interest in some particular phase of study may cause the investigator to overlook the importance of other elements in the problem. Thus to Professor Moore climatic conditions seem of great importance, while Professor Mitchell relegates them to a very minor position. As time passes it will doubtless be possible to estimate the significance of each factor with more accuracy. When this is done a more satisfactory theory can be formulated and methods of prevention and alleviation employed to better advantage.

TAXATION OF LAND AS A REMEDY FOR UNEMPLOYMENT

BY BOLTON HALL,
New York City.

From its nature the taxation of land values must come gradually. Were its sudden introduction possible, it would make a serious disarrangement of existing conditions. In early days there was nothing to tax except personal property, for as long as the best land was still to be had free, land had little selling value. Consequently, the state taxed personal property as well as it could, and the difficulties of doing so were not so great as under the present complicated conditions.

Neither was there at that time any unemployment problem, the land being as open as it was to Adam or to Robinson Crusoe, so that no man could be out of work until at least all of his attainable desires were satisfied. This was true even in the early history of this country, when the Pilgrim fathers arrived. If anyone had complained that he was out of work, those grave Puritans would have laughed at him. They would have said, "clear those fields," "pile up those stones," "cut that timber," "plow this soil," "build a log house," "get some sea weed for manure," "catch fish" or "haul sand!" "Why there are thousands and thousands of things to be done. Do any of them, and we will give you not only food and shelter and clothing, but much more, in exchange for your work." In those days a proposal for the cultivation of vacant lots for the unemployed would have seemed funny; now it seems only sad that the land cannot be had for the purpose, while there are lands idle around every city, which could employ directly or indirectly every idle man in those cities, could its use be obtained.¹

Accompanying the restriction of the use of the natural opportunities due to monopoly is of course lowered wages for some and fierce rivalry not only for the sale of goods but for jobs, a rivalry which has the curious effect of making a cut-throat competition

¹ New York city has 198,000 vacant lots, many of which contain many acres.

in the sale of higher cost goods. The merchant finds it just as hard to sell his goods in competition with those who wish to sell, as the laborer finds it hard to sell his work in competition with those who wish to work.

That this is the basis of "exploitation of labor" is recognized by the prophet of socialism; he says: "We have seen that the expropriation of the mass of the people from the soil forms the basis of the capitalist mode of production."²

Of course, where the primary seller practically controls the land, the primary source of supply (as is now true of oil, coal, iron, and many other things), or where he enjoys some governmental privilege that protects him from competition, such seller is enabled to sell at more than a fair profit—is enabled to collect tribute from all that use his particular thing.

But, except where protected by such advantages, keen competition pervades all industries. The man that engages to work for the merchant for "wages" or "salary" is compelled to compete with a certain number of others seeking employment, and is therefore forced to accept correspondingly lower wages. His employer must likewise compete with other merchants so numerous that there is not enough trade for all, and hence must not only pay his employees as little as possible, but get low "wages" (the businessman's profits are his "wages") for himself. The merchant, in turn, seeks to buy from the wholesaler as cheap as he can, and the wholesaler, knowing that competing houses are bidding for business, sells at a price not sufficient to net him a fair return on the investment, risk and labor involved. When the wholesaler goes to purchase from the manufacturer, the same struggle is enacted; and in producing the raw material for the manufacturer, the producer also finds it hard to make a living profit. Thus we find cut-throat competition that (notwithstanding occasional brief respites,

² *Capital*, by Karl Marx, Appleton & Co., 1889, page 793. The destruction of "petty industry" has been accomplished, Marx continues, by "the transformation of the individualized and scattered means of production into socially concentrated ones, of the pigmy property of the many into the huge property of the few, the expropriation of the people from the soil, from the means of subsistence, and from the means of labor; this fearful and painful expropriation of the mass of the people forms the prelude to the history of capital." The chapter is one of the concluding ones of the work, and is replete with statements of the same purport as the foregoing.

seeming in contrast like periods of "prosperity") grows more and more general, and rapidly spreads throughout every department of industrial life.

This overcrowding, at first felt only by day laborers, and by them only in limited localities, has now become world-wide, affecting alike laborers, mechanics, clerks, salaried men, business men, larger merchants, small capitalists, and (where no special privilege is held) larger capitalists—finally encroaching on the world of learning, forcing many a professional man to agonize over the difficulty of making a living when his thought should be centered upon his profession.

What does it mean—this overcrowding throughout the industrial world? This: the number of opportunities of employment does not equal the number of applicants for employment. Give ninety-five opportunities of employment to every hundred men, and we force upon ourselves the conditions of today: The worker, fearful lest another underbid him for his opportunity to "sell his labor" (or the product of his labor), is forced to accept less and less, as competition becomes keener and keener—thus he gets for his labor an ever-diminishing proportion of what that labor produces; and, worse than all else, feels himself grow less and less able to assert his manhood and independence.

But suppose we could in some way make more opportunities than there are men to use them: is it not evident that the tendency to lower wages, reduced salaries, and smaller profits would then be reversed and industrial conditions would become normal?

At first thought so far-reaching a change may seem impossible; but such a change can be accomplished.

Careful attention should be given to the difference between what is commonly called "competition" and true competition. True industrial competition may be defined as rivalry in production with equal opportunity—as in making bricks where all have equal access to the material from which bricks must be made. What is commonly called "competition" is a contest in which producers, denied equal access to natural resources, are fighting one another for opportunity to produce at all; the increasing keenness of the struggle being reflected in their willingness to accept lower wages, reduced salaries and smaller profits.

It is necessary to keep this distinction in mind to avoid the

common error that we can solve present industrial problems by "eliminating competition." Competition is natural and as impossible of elimination as is gravitation.

To insure the full and free operation of the law of competition, however, it is necessary to secure to everyone equal access to the field of labor. Men make things to satisfy their desires directly, or to exchange for things that others have made: whatever things men make that have exchange value are called "wealth." The whole universe excepting men and the things that men make is called "land"; these two, human exertion and the earth, are the sources of all production. The expenditure of human energy in producing wealth is called "labor." Hence the axiom that "from land does labor produce all wealth."

But men are tool-making animals; they not only make things for the direct satisfaction of their desires, but they make and exchange implements, the use of which enables them better and more easily to get what they want. These tools and implements, being products of labor and being exchangeable, are "wealth"; but being that part of wealth that is used in the production of other wealth they are also "capital."

While the first crude forms of wealth must have been made without the use of tools, that is, produced from land by labor without capital, it is hard to think of a labor product bought and sold today in the production of which labor has not employed capital. Therefore of modern production we can say that "from land does labor, using capital, produce all wealth."

Contrast the early days of our country's development, when capital and labor had free access to land, with the present time, when so much of the earnings of both must go, either directly or indirectly, to pay some form of rent: then capital and labor could divide between them the full product of their labors; while they today must be content with but a small part of that product, over the division of which they continually quarrel. While the worker's available income, (wages, salaries, profits on goods, etc.) has been shrinking, and while interest on capital has been declining, land value has been going up, up, up, until in some cities it has reached as high as \$20,000,000 per acre. Now, when the employer and his employee must between them meet these ever-increasing demands of landowners, what wonder that little is left of their earnings to

divide between themselves! And the landowners that absorb the lion's share of the product do nothing as landowners except to grant to capital and to labor permission to use land.

And not only are capital and labor deprived directly of their earnings through the exaction of increasing ground rents: they suffer an indirect, though usually far greater, loss through the general overcrowding of all trades and professions, which restricts the purchasing power of the consuming public, and thus limits the markets that every producer of wealth must share with competitors in selling his product. For a restricted market means smaller profits for the employer and usually the absolute necessity on his part to pay reduced salaries and lower wages to his employees. When coal seams, iron mines, oil fields, dock facilities, agricultural lands, city lots and all other parts of the earth that might afford scope for work are either held out of use, merely partly used, or opened only at speculative or extortionate prices, of course labor must be unemployed. Idle lands which are in demand imply idle hands which cannot be in demand. For clearly no one would pay for land which he had no prospect of finding hands to work. If people are willing to pay a million dollars for a building site, it means that enterprise is greatly in need of opportunity to employ labor or will be greatly in need of opportunity in order to supply a social want for a building. From deprivation of this opportunity both the laborer and the capitalist that would erect and use the building suffer alike.

Failure to recognize that capital and labor suffer together, and that their interests are identical, springs from the common thought-habit of confusing capital and monopoly. We see a few men acquiring great fortunes, and are apt to class them as "capitalists"; on investigation, however, we usually find that their great wealth-acquiring power lies not in the exercise of marvelous wealth-producing energies, not in the possession of superior capital (capital today goes begging for favorable opportunity of investment), but in the possession of some franchise, which conveys the power of land ownership—the power to appropriate, unearned, the wealth produced by others. The power of the so-called coal trust, for instance, resides, not in its ability to produce much or superior coal and thus to earn big profits corresponding to the service rendered to coal consumers, but in its power to hold out

from production unused coal lands, and thus to force the public to buy its products at inflated prices.

In view of the real facts, how absurd and yet how natural is the present strife between capital and labor. The ancient rhyme says:

When the cobbler wants clothes,
And the tailor wants boots,
They exchange work for work
And both parties it suits;
When the landlord wants clothes,
He just holds out his hand
And exchanges permission
To live on the land.

Capital and labor clash because both fail to recognize that they are robbed alike by their common enemy, land monopoly, which sufficient taxation of land value will manifestly destroy.

That the present mode of taxation has persisted so long is mainly due to the thoughtlessly accepted dictum that "the payment of taxes should be according to ability." A more reasonable and universal principle is that payment should be according to benefit, that each should pay for what he gets, not according to his wealth, but according to the value of what he receives.

The benefits of good government and of civilization result in increase of land values. As Thorold Rogers says—"Every improvement in the condition of the earth, every bridge, every highway, every railroad, raises rent." Is it not then obvious that it would be just to tax equally all lots of equal value, whether they be used or unused, built upon or vacant, highly improved, poorly improved, or unimproved? Would it not be fair and equitable to require of every lot owner that he pay a tax equal to that paid by each of the others, provided the lots are equally desirable and valuable? Why fine people for making improvements? Why not have every one pay in taxes into the common treasury an amount proportionate to the value of the land he owns, regardless of whether that land be used or not used, thus encouraging landowners to employ labor in making improvements, rather than to hold land out of use in the hope of future higher prices?

The first step in this proposed change in taxation is to assess

the value of the land separately from the value of the improvements thereon, as is now done in New York City and in many other municipalities, so that the taxation on the value of land becomes separate and distinct from all other taxation. Then can follow the reduction or the abolition of the more objectionable of the taxes now levied, with an increase in the land-value tax sufficient to make up the necessary revenue. This process can be made as slow or as rapid as may be deemed expedient—slow enough as in Pittsburgh, Pennsylvania, to permit new adjustments to be easily made, or more rapidly as in Vancouver, where it is proved to be desirable.

Many of the holders of unused lots, and of lots but partly used, if compelled to pay taxes thereon as great as those imposed on fully improved lots of equal value, would at once begin to make improvements. This would give to labor increasing employment at increasing wages; business of all kinds would be stimulated, and this would cause a still further increased demand for houses by the people thus financially enabled to occupy them. This increase in buildings would go on until the market was fully supplied at prices little more than the cost of producing the buildings. Except for the natural increase in demand caused by increase in population, this newly stimulated demand for houses would eventually reach its limit and cease; but with labor fully employed at good wages such demand would not be satisfied until every industrious and deserving man had a comfortable home. And then there being more lots than would be needed for building, holders would seek purchasers, at reduced prices, among those who could put the land to other uses. The extraordinary results of the cultivation of vacant lots by the unemployed in Philadelphia and other places show that there is a steady and unsatisfied demand for such lands for various purposes.

And if land values became the one source of all public revenue (federal, state, county and local) the tax on land values would be sufficiently heavy to reduce the selling value of land to almost nothing. This has in fact been the practical result in the single tax experiment colonies at Arden, Delaware (near Philadelphia), and at Free Acres, New Jersey (near New York). For the selling value of land is but the capitalization at the current rate of interest of so much of the rental value of the land as is not taken in taxation.

This is what single-taxers mean by "free" land—not that possessions would be disturbed, nor titles invalidated; not that there would be any decrease in deeds or books of record, but that land would, under the new system of taxation, be very cheap and its use therefore easily had by whoever desired to work it.

No adequate idea of the vastness of the benefits to follow this change in taxation can be gotten by considering town lots only. It is proposed that all land be taxed at its full rental value. A very few men now own the anthracite coal deposits of the country; they permit the mining and marketing of only a limited amount of coal, withholding from use the far greater part of the coal lands to maintain an artificially high price in the coal market. But were all unused coal lands (now rated at merely nominal figures) taxed at their full rental value, and thereby forced into the market either for sale or for lease, capital would be attracted to the opportunities thus offered and new mines would be opened up. The operators of these new mines would be free, not only from the burden of interest charges on bonds issued for the purchase of surplus lands and from the cost of holding other mines and lands out of use, but also free from taxes on buildings, machinery, animals, timbering, piping and all other capital invested. To cut out these fixed charges and abolish taxes on the capital used, and to introduce free competition among coal-mining operators, would both lower the price of coal and increase the amount of coal marketed. At the same time, competition among the increased number of coal-mining operators for the services of miners would tend to raise miners' wages—a tendency that would be stimulated because the actual coal mine workers would always be free to pool their capital and form operating companies on their own account.

And when we further consider that the lands to be taxed are not only town building sites and coal fields, but the immensely valuable lands that lie in or near the large cities or border our harbors, and the millions of acres of virgin farm lands, but also railroad rights of way, vast mineral resources, etc.,—then we see that in land-value taxation we have an easy, simple method of forcing the hand of monopoly to relax its hold upon natural resources. This will remove the artificial barriers that we have found to be the cause of industrial and business overcrowding, the removal of which would be the means of opening more opportunities of em-

ployment for both capital and labor than could be taken advantage of by increasing population for generations to come.

As a fiscal measure, practical men will see that greatly improved industrial and business conditions must result and have resulted from the proposed tax.

This "reform" has already passed the merely experimental stage. New Zealand, the Canadian northwest provinces and many other places have had it in partial operation for years. So it is sufficient for us to note, without giving a history of the development of what Thomas G. Shearman called "natural taxation," that every district that has tried a little wants more of it, and by its competition forces its rivals to adopt it also. There are no steps backwards.

It is true that nowhere, as yet, has enough of the annual rental value of land been taken to kill speculation. When some place does take enough to make it unprofitable to hold any lands idle, it will hardly be necessary to call attention to the plan; it will call world-wide and insistent attention to itself.

But to them that take a higher and a broader view of man's social relations—to them that can feel the power of a great truth and by it be lifted "above the mists of selfishness"—to them should the proposal appeal even now with greatest force. For while it is not claimed that this reform will really alter human nature, as it would not be claimed that removing a plank from the lawn would cause the grass to grow, yet, just as removing the plank would permit the expression of nature's forces in healthy, growing grass, so will the destruction of land monopoly make men economically free—free to employ themselves individually or coöperatively, each free to acquire and enjoy without encroaching on another's opportunity; free to be generous and high-minded without fear of coming to material want. This freedom of both labor and capital to work can fairly be expected to be the most complete of all cures for unemployment. Then, with superabundant production, will be realized the ideal that without bringing want upon ourselves, we may "give to him that asketh and from him that would borrow turn not away."

SOCIALISM AS A CURE FOR UNEMPLOYMENT

BY JOHN SPARGO,

Author of *Socialism*.

The problem of unemployment is co-extensive with the capitalist system. Wherever the capitalist economy prevails we find the problem of unemployment. Even in times of industrial expansion and prosperity there is always a surplus of available labor in some places and some occupations, though there may be a deficit in other places and other occupations. Never at any time has the capitalist economy of any country provided a job for every worker and a worker for every job.

The presence of considerable masses of unemployed workers is essential to the capitalist system. The battalions of workers out of employment constitute the reserve army of the industrial system. Without a safe margin of available unemployed labor the whole edifice of capitalist society would totter and fall. That this is true hardly needs demonstration. One has only to consider what results must inevitably follow the complete absorption of the labor supply, so that not a single worker remained unemployed. Given such a condition, there would be no effective check upon the workers. In the struggle against the employing class in which they are engaged they would no longer be at a disadvantage. They would no longer fear the competition of unemployed workers ready to take their jobs. They could and would dictate their own terms. A virtual dictatorship by the proletariat would result. It is the consciousness that other workers to take their places are available which sets definite and sharp limits to the demands of the workers under the present industrial system.

But if a certain reserve of unemployed labor is a necessary condition of capitalism, too large an amount of it is a menace. When the army of unemployed workers swells beyond the limits of safety, as it tends constantly to do, the foundations of the social order are endangered. There is an increase of poverty, of vice and of crime which threatens to engulf society. Moreover, social discontent and resentment assume alarming proportions. Then it

is that the proletariat is in danger of rising like another blind Sampson and pulling down the pillars of the entire social system. Then it is that the problem of unemployment assumes a frightful mien. Then it is that the lords of industry call upon their servitors and retainers for relief and protection. Then it is that we turn feverishly to the discussion of remedies for unemployment.

Now, it is an inherent characteristic of the capitalist system that it tends always to increase its reserve army of unemployed workers beyond the limits of safety. Inventions and improvements in industrial processes displace large numbers of workers. True, in time, adjustments are made, so that inventions and improved methods of productions are not to be opposed by enlightened workers as creators of unemployment and its attendant evils. Nevertheless, the adjustments take time and the displaced workers do become unemployed for a while, and often for a very long while.

Despite the tendency to monopoly exhibited by modern industrial society, there is still a vast amount of competition and that competition is a factor, though by no means the sole factor, in the lack of anything like a scientific organization of industry. Production is still haphazard, anarchical and unregulated. We produce certain commodities feverishly, stimulated by a rising market. Workers are overworked with lamentable ill effects, both physical and moral. Then there is a more or less sudden halt. The market is glutted. From overwork the workers pass rapidly to unemployment. From my New England garden I can look down upon the factories in the village below. Although the factories are engaged in the production of staple goods, for which the demand is more or less steady and consistent, they are subject to great fluctuations. There are periods when work is carried on night and day, when the workers are "used up" at a terrible rate; there are periods when there is very little work, when the factories are nearly silent and the workers are idle on the streets. Much of that periodic unemployment which we associate with the seasonal trades is in reality due to the same lack of scientific organization and might be averted.

Finally, capitalist industry, through its intensive exploitation of the workers, its reckless disregard of their physical well-being and its passion for "cheapness," is constantly making large numbers of workers *unemployable*. The excessive strain of modern industrial life, coupled with the bad conditions of life and labor, prematurely

exhaust great masses of workers and unfit them for remunerative employment. As soon as they have become old, or have lost their efficiency through any cause, these "unemployables" are cast upon the *debris* heaps of our cities. This aspect of the problem is the one which is most tragic and terrible of all.

Whatever palliation of the worst ills of unemployment may be possible within the limits of capitalist economy, no real solution of the problem is possible within those limits. The complete abolition of unemployment is only possible in an industrial economy fundamentally different from capitalism. That result might be attained through a system of what is called state socialism, that is to say, the substitution of the state for the capitalist and of the government ownership and operation of industry for the present method. Such a system ought not to be confused with democratic socialism. Perhaps state capitalism would be a better name for it than the term state socialism which is usually applied to it.

It is to be observed that unemployment has never, within the capitalist economy, resulted from the full and complete satisfaction of all the felt wants of the members of society. On the contrary, the greatest amount of unemployment is always coincident with the most widespread lack of commodities. We have the appalling paradox of idle shoemakers willing, able and anxious to work and a vast horde of shoeless men, women and children. Textile mills and clothing factories are idle, their operatives eager and willing to work, while hundreds of thousands need clothing. There is only one reason why the idle shoemaker is not working to make shoes for the idle textile workers and why the idle textile worker is not working to make cloth to clothe the idle shoeworkers. They lack the power to make their demands efficient. Production is not organized primarily for the purpose of supplying needs, but primarily for the purpose of affording profit to investors. Our criterion is not whether goods are needed but whether goods can be profitably sold. So long as we have production for profit rather than production for use, so long we shall have idle makers of clothing on one hand and shivering, ragged human beings on the other hand. There can be no escape from the evils of unemployment until we cease producing for profit and organize our production with the single purpose of supplying the felt needs of all the members of society.

Now socialism proposes to do that very thing. Under socialism, the anomaly of a co-existent dearth of consumption goods and an unemployed industrial army could not exist. Nor would the unemployment of workers in one city be possible while other workers in the same industry in another city were overworked. For socialism involves the reconstruction of industry upon the principle of production for use. It involves the rationalization of industry, the proper adjustment of production to the social requirements. It is entirely possible to take the element of chance out of the business of production; to know with a fair degree of precision the total volume of commodities which it is necessary to produce within a given time.

Socialism, then, implies a highly developed organization of industry which will reduce to a minimum the waste, the overlapping, the uncertainty of capitalistic production. For industrial anarchy it would substitute industrial law, and for industrial guess-work industrial science.

A socialist society would not only find useful employment for all those elements which go to make up the unemployed mass of the present system, but also for the vast numbers now employed at useless and anti-social tasks, for which a socialist economy could have no place. Most of the labor spent in advertising belongs to this category. So do the vast majority of travelling salesmen, lawyers, brokers, bankers, clerks, insurance agents, real estate agents, and so on. So do the vast majority of those employed in the manufacture of munitions of war, and in the naval and military services.¹

That which would be quite impossible for capitalism with its planless production would be quite easy for socialism with its scientific organization of industry. It could carry out the Pauline injunction of denying the right to eat to the shirker who refused to work though capable of doing so. It could apply the principle, moreover, to the Silly Willies on top of the social scale as well as to the Weary Willies at the bottom.

It may be objected that this simply sets forth the possibilities

¹The maintenance of a sort of international police force would, I think, be quite compatible with the spirit of socialism, and would require a relatively small amount of labor of the kind described in the latter part of the foregoing sentence.

of Utopia. That is true, of course, but it is hardly pertinent as a criticism. The socialist who points out that the problem of unemployment is insoluble within the capitalist economy, and that socialism involves the scientific organization of industry and the elimination of unemployment has sufficiently answered the question, "How will socialism do away with unemployment?"

Of course, other supplementary questions may be asked. The socialist may be asked how the ideal socialist state is to be attained, how the industrial reorganization essential to it is to be accomplished. Or he may be asked the very much more difficult question, "What would the socialists do now to cure unemployment if they were elected to power?"

This latter question is highly pertinent to the present discussion and I propose to answer it briefly. The question is not only pertinent, but highly important, for it is inconceivable that socialism will be attained suddenly, that there will be a sudden transformation from a capitalist economy to a fully developed socialist economy. If the socialist state of society is to be reached at all, it will be reached through a series of changes. It will be an evolution. And in the transition period there will be many attempts to deal with the evils of unemployment. In proportion as men recognize the impossibility of doing away with unemployment under capitalism, and gain confidence in the socialist movement and its principles, socialists will be elected to office and expected to demonstrate their capacity to deal with this baffling problem. And upon their success or failure depends, to no slight extent, the rate of future progress toward socialism.

It may not be quite fair to impose this test upon the socialist. He is entitled to say that the problem which capitalism has created and found insoluble cannot be solved within the capitalist system of production, even by socialist legislators and executives. He is fairly entitled to say that, so long as the capitalist economy prevails, such superficial modifications of the system as are possible short of a revolutionary departure, such as the acceptance of the socialist principle would be, could not make possible the abolition of unemployment.

Nevertheless, the socialist movement must be and is prepared to meet the challenge. It has a fairly well defined program. If we assume for the purpose of this discussion that the next national

campaign will result in the election of a socialist president and an effective socialist majority in Congress (a result which, I need hardly say, I do not anticipate!) we shall have a fairly clear and definite idea of the task with which the socialist administration would be confronted.

Socialism, contrary to a widespread opinion, does not of necessity imply the ownership and operation of all industries by the state. The aim of socialism is not the realization of a plan of state ownership, but rather, the entire elimination of economic exploitation. That might well be effected through voluntary coöperation in some industries, and it is considered likely that such voluntary coöperation by groups of workers will hold an important place in the socialist economy. That being the case, a socialist administration would be able to palliate the evils of unemployment and, at the same time, contribute to the upbuilding of the socialist economy, by organizing voluntary coöperative associations of producers and advancing them the necessary capital free of interest. This method, advocated long ago by Lassalle and Louis Blanc, may yet prove to be an important item in a constructive socialist program.

The socialist administration would naturally take up the task of dealing with the unfit, the unemployable. In this category are included the aged and outworn, the prematurely exhausted, the sick, the maimed and the morally defective, including the tramps, the lazy, the inebriate, the shiftless and dissolute. It is obvious that these varied groups cannot be dealt with uniformly. For dealing with the morally defective, groups named labor colonies appear to offer the only satisfactory method. The penal characteristics of these colonies could easily be varied to suit the needs of the different classes of moral defectives sent to them.

The other groups of the unemployable must be differently dealt with, of course. Pensions for the aged and outworn, and for the maimed and diseased would have to be instituted. The most progressive nations of the world have already made considerable progress in this direction. For those who are partially disabled, light work might be provided in publicly operated workshops or farm colonies with pensions to supplement the inadequate earnings.

The state would have to furnish transportation for workers who desired to move from places where there was a surplus of labor

to places with a deficit of labor. Today we have the anomaly of tens of thousands of workers in the industrial centres idle and vainly seeking employment, while in other parts of the country thousands of farmers vainly call for laborers. The unemployed worker of Pittsburgh or Jersey City does not go to Texas or Kansas, for very obvious reasons. The cost is prohibitive. The work offered is for a few weeks or months at most. If he could get free transportation to and from the job in Texas or Kansas, the worker in Pittsburgh or Jersey City would perhaps be glad of the change of employment and location. Free transportation for workers, operated in conjunction with efficient employment bureaus, would do much to adjust the supply of labor to the demand and go far toward solving the problem of the "hobo."

We have learned through the great world war that the modern state, as a military necessity, must resort to the mobilization of labor no less than to the mobilization of armies and navies. We have yet to learn that the mobilization of labor in times of peace is an economic necessity of the highest importance. The "right to work" must be established. If it can only be realized through the assumption of the control of industry by the state that step will be taken. Capitalist industry simply proves inadequate to the social need.

Of course, the socialist program would include insurance against unemployment. The time has come when we must recognize that each industry must bear the cost of maintaining its own victims. Whether industrial accidents rob the worker of a limb, or industrial processes or conditions rob him of health and strength, or industrial uncertainty robs him of his employment, economically the result is practically the same. His wage-earning capacity has been destroyed or impaired, and the industry ought to bear the burden.

Working upon these lines, the socialist administration, charged with the heavy responsibility of repairing the wrecks of capitalism, and peacefully effecting the transition to socialism, would doubtless find that the new social wine could not be contained in the old capitalist bottles. The new social spirit would require new social forms for its expression. Public ownership would more or less rapidly take the place of capitalist ownership, and as fast as the change occurred the democratization of the new collective property and

responsibility could begin. And in proportion as industry becomes socialized the importance of remedial legislation and effort will be lessened and the importance of preventive legislation and effort increased.

But while a clear-visioned socialist administration, working within the capitalist system, could do much to reduce unemployment and to mitigate its worst evils, unemployment itself will never be wholly abolished until we have attained the socialist state.

STATUTORY PROVISIONS FOR AND ACHIEVEMENTS OF PUBLIC EMPLOYMENT BUREAUS

BY HENRY G. HODGES,

Harrison Fellow in Political Science, University of Pennsylvania.

Recognizing one of the purposes of government to be the supplying of such information to its citizens as will promote their welfare, Governor Glynn of New York, in his message of March 6, 1914, emphasizes the state's duty to provide a system of labor exchanges. He concludes that "there is no information more vital to the citizen of the state than knowledge of where he may obtain work to feed and clothe himself and his dependents." In its first annual report the United States Industrial Commission points to *unemployment* as one of the principal causes of industrial unrest.¹ The same report reiterates advice received from various states to the effect that the condition of unemployment is nationwide. The striking fact is that the issue is more acute on the Pacific coast than in the older sections of the East. This distress is caused largely by an antiquated system of labor marketing. The present system, in most cases, is adaptable to conditions that existed when the United States was east of the Alleghenies. There have recently developed hopeful signs of the abandonment of the old labor peddling system.

The two objects the legislators have in mind in establishing state free employment bureaus are: *first*, to regulate private agencies through competition; *secondly*, to fulfill the state's duty in bringing together the man and the job.² The purpose of the state agency is to care for the *reserve* labor; to keep that reserve as low as possible by a coöperating system of labor exchanges. The efficient reserve for the United States is not gauged by the sum of the reserves necessary for its many thousands of factories. A more intensive shifting of the shiftable labor must be accomplished.

¹ *First Annual Report of the Commission on Industrial Relations*. Washington, D. C., 1914, p. 21.

² For an extended account of the objects of the state employment bureaus, see *United States Labor Bulletin* No. 109, p. 35.

Nineteen states have passed laws providing for more or less effective systems of free employment offices. A bill with a similar purpose has been reported favorably (March 30th) to the legislature of California, by the committee to which it was referred. A bill was presented to the Pennsylvania legislature, providing for a system of public employment offices in the state, on April 7, 1915. Three of the nineteen established bureaus, *viz.*, Nebraska, Maryland and South Dakota, are inactive; two more, Kansas and West Virginia, are operating in a very limited manner.

Municipal bureaus are operated independently in seven states, as follows:

State	Bureaus	Established
Arizona	Phoenix	1914
California	Los Angeles	1893
	Sacramento	1902
	Kansas City	1912
Missouri	Butte	1902
Montana	Great Falls	1905
New Jersey	Newark	1909
New York	New York	1896*
Ohio	Cleveland	1913*
Oregon	Portland	1912
Washington	Seattle	1894
	Tacoma	1904
	Spokane	1905
	Everett	1909

* Abandoned.

Late in 1914 the Bureau of Immigration of the United States Department of Labor began the establishment of thirty-eight branch offices throughout the country, as indicated by Table I. These offices were established primarily for the distribution of farm labor.

"The entire country has been divided into eighteen distribution zones, and the distribution of labor in each zone will be in charge of an officer of the immigration service at the headquarters of each zone. It is hoped to have this plan in operation throughout the country within the next few months."³

³ Extract from a letter from the United States Department of Labor, dated December 3, 1914.

TABLE I*
ZONES FOR DISTRIBUTION OFFICES

September 1, 1914

Zone No.	Headquarters	Territory	Sub-branches
1.	Boston, Mass.	Mass., R. I., Maine	Providence, Portland
2.	New York City	N. Y., N. J., N. H., Vt. Conn.	Buffalo
3.	Philadelphia	Pa., Del., W. Va.	Pittsburgh
4.	Baltimore, Md.	Maryland	
5.	Norfolk, Va.	Va., N. Car.	
6.	Jacksonville, Fla.	Fla., Geo., Ala., S. Car.	{ Birmingham, Charles- ton, Savannah, Mobile
7.	New Orleans, La.	La., Miss., Ark., Tenn.	{ Gulfport, Miss. Memphis, Tenn.
8.	Galveston, Tex.	Texas, N. Mex.	Albuquerque
9.	Cleveland, Ohio	Ohio, Kentucky	
10.	Chicago, Ill.	Ill., Ind., Mich., Wis.	Detroit
11.	Minneapolis, Minn.	Minn., N. D., S. D.	
12.	St. Louis, Mo.	Mo., Kan., Okla., Ia.	Kansas City, Des Moines
13.	Denver, Colo.	Colo., Wyo., Neb., Utah	Salt Lake City
14.	Helena, Mont.	Mont., Idaho	Moscow, Idaho
15.	Seattle, Wash.	Washington	
16.	Portland, Ore.	Oregon	
17.	San Francisco, Cal.	Nor. Cal., Nevada	Fresno, Sacramento
18.	Los Angeles, Cal.	Southern Cal., Ariz.	San Diego, Tucson

* Table supplied by Department of Labor.

The foregoing zones for the purpose of facilitating the distribution of farm labor in the United States are hereby established.

Approved:

(Signed) W. B. WILSON,
Secretary.

(Signed) A. CAMINETTI,
Commissioner General.

STATUTORY REGULATIONS

Dates of Laws

Of the nineteen states which have passed laws providing for free employment agencies several have passed more than one law on the subject. In such cases the provisions of the most recent act are given.

The bureau first created under state law is that of Ohio, established 1890. Laws creating state bureaus began in earnest with the twentieth century, although two more, Missouri and Illinois, were established in 1899. Most of these older laws have since been materially modified or replaced entirely. Between 1900 and 1905 Connecticut, Maryland, Michigan, Minnesota, West Virginia, Kansas and Wisconsin passed laws providing for free labor exchanges. Massachusetts followed in 1906; Colorado and Nebraska in 1907; Oklahoma and Rhode Island in 1908; Indiana in 1909; and by 1914 Kentucky, South Dakota and New York had provided for "state employment bureaus."

General Supervision and Local Offices

There are two favorite ways of providing for the location of local employment offices. The first is to name a minimum population standard; the second is to leave the selection to the discretion of those in charge of the bureau. The first method is followed by Colorado, Illinois, Indiana and Missouri; the second by Wisconsin, West Virginia, Rhode Island, Massachusetts and New York. In Connecticut, Michigan, Minnesota and Maryland the legislators themselves selected the locations for the local offices, and provided accordingly in the laws. Ohio is divided into five districts, with a local office in each district. Oklahoma has a central office at the capitol, and two branch offices. Kansas provides for local offices in cities of the "first and second class." Nebraska, Maryland and Kentucky provide for a central office only, the business to be transacted by mail. Where population is made the basis for the location of local offices, the minimum requirement ranges from 25,000 in Colorado to 75,000 in Missouri. Colorado allows two offices in a city of 200,000, while Illinois provides for three in a city of 1,000,000 population. The California bill provides for offices "in the cities of San Francisco, Los Angeles and Sacramento, and thereafter, whenever he [commissioner of labor statistics] deems it necessary, in other cities and towns."⁴

In a great number of cases the general supervision of the employment bureau is given to the commissioner, deputy commissioner, or chief, as the case might be, of the Bureau of Labor Statistics. Such is the case in Colorado, Connecticut, Indiana, Maryland,

⁴ *Senate Bill No. 325, Section 2. Introduced January 18, 1915.*

Massachusetts, Missouri, Rhode Island and in the proposed law in California. The Massachusetts commissioner has requested in consecutive annual reports to have the Massachusetts bureau transferred from his department. The commissioner of labor directs bureau affairs in West Virginia, Oklahoma, Ohio, Nebraska, Minnesota, Michigan and Illinois. Kansas and New York, and Pennsylvania in its proposed act, provide for a Director of Free Employment, and Wisconsin, under its 1911 law, gives full supervisory powers to the Industrial Commission created by the act.

Most states supply a superintendent and an assistant for the local office. In some cases this force is supplemented by a clerk, interpreter and special agents. Colorado, Connecticut, Illinois, Indiana, Massachusetts, Minnesota, Missouri, Ohio, Oklahoma and New York have provided for some combination of these officers. Kansas thrusts the duties of the local office on the city clerk, unless the local council provides otherwise. No extra compensation is allowed the city clerk, but a "penalty" provides that he shall be relieved of this work unless it is properly performed; "Provided, Such removal shall not affect the tenure of his office as to its other duties."⁵ Maryland and Nebraska provide for a central office only, with such clerical assistance as may be deemed necessary. The Illinois statute states that "The assistant superintendent or clerk shall in each case be a woman."⁶ The statutes of Michigan, Rhode Island, West Virginia and Wisconsin leave these details to the discretion of those in charge.

Colorado, Indiana, Kansas, Missouri and Oklahoma fix the superintendent's salary at \$1,200 per annum. Where an assistant is provided the remuneration ranges from \$600 in Oklahoma, to \$1,000 in Colorado. Illinois provides \$1,500 for the superintendent, \$1,200 for the assistant and \$1,000 for the clerk. New York has no statutory provisions regulating salaries, but in practice has allowed its superintendents \$2,000, with graded salaries for subordinate officers. The other states leave this matter to the discretion of the supervisory powers.

⁵ *General Statutes of Kansas, 1909*. Chapter 185, Section 12. Law of March 29, 1901.

⁶ *Revised Statutes of Illinois for 1913*.

Senate Bill No. 165, Section 2. Approved June 21, 1913.

Appointment and Tenure of Office

In all cases where the law enumerates provisions on the subject of appointment, the recommending power, at least, is given to the person having general supervision. In the majority of cases this same supervisory power has the privilege of appointment. In Illinois, the "Governor, with the advice and consent of the Senate," has the actual appointing power.⁷ The New York law provides for civil service appointments. The "director," with a \$4,000 salary, is specifically included in this rule, the law stating that, "As a part of such examination each candidate shall be required to submit a detailed plan of organization and administration of employment offices such as are contemplated by this article."⁸ The proposed Pennsylvania law leaves all appointments to the commissioner of labor, but enumerates the qualifications which the "director" should possess. Kansas, Maryland, Minnesota, Nebraska, and California, in its present bill, give no instruction on this subject.

Colorado, Illinois and Ohio provide that their local officers shall serve for a period of two years, "unless sooner removed for cause." The superintendent has charge of engaging and dismissing his subordinates in Ohio. In Oklahoma the local officers serve during the term of the commissioner who appointed them. Nebraska, Minnesota, Maryland and Kansas, making no provision for method of appointment, likewise make none for tenure of office. The other states, with the exception of New York where civil service regulations are required, leave the tenure of service of local officers to those in charge. Three of these states have, in practice, adopted civil service regulations.

Advisory Committee

A recent development in the management of the local offices is the advisory committee. Such committees are provided for in the New York law, are specified by the Wisconsin Industrial Commission, and are included in the proposed law for Pennsylvania. This committee, as its name signifies, acts in an advisory capacity

⁷ *Revised Statutes of Illinois for 1913. Senate Bill No. 165, Section 2. Approved June 21, 1913.*

⁸ *New York Labor Laws of 1914. Chapter 181, Article 5-A, Section 66.*

to the local superintendent. Employers and employees are represented on the committee, which generally elects its own chairman. The New York law requires:⁹

At the request of a majority either of the employers or of the employees on advisory committees, the voting on any particular question shall be so conducted that there shall be an equality of voting power between the employers and the employees, notwithstanding the absence of any member.

Charge for Service and other Administrative Provisions

With two exceptions the various laws stipulate that there shall be no charge to employer or employee for the service rendered by the state bureau. The Wisconsin law leaves the question to the Commission. The 1909 law in Indiana provided that "No fee or compensation shall be charged . . . except it shall be lawful for applicants to enclose sufficient postage for all replies."¹⁰ This provision was scarcely ever complied with in practice and was repealed in the law of March 6, 1911. Nine states name penalties for accepting fees. The most common penalty is "not less than twenty-five (\$25) dollars nor more than fifty (\$50) dollars, or imprisonment in the county jail not more than thirty days, or by both such fine and imprisonment at the discretion of the court."¹¹

Four western states, and Rhode Island and New York in the east, stipulate advertising as a legitimate expense. New York provides that this item shall not exceed 5 per cent of the total appropriation. The New York and Massachusetts bureaus are allowed to carry on outside work of a social nature. Massachusetts and Michigan have a fund for general expenses. Colorado and Illinois provide for interpreters when advisable. Several states declare that stationery and printed matter shall be furnished by the secretary of the state.

In cases where the number and nature of the reports of local offices are not left to the direction of the commissioner, the laws generally provide for weekly and annual reports, the annual report to contain a detailed expense account as well as more or less statistical data. Ohio requires a semi-annual report in addition to the

⁹ *New York Labor Laws of 1914*. Chapter 181, Article 5-A, Section 66-f.

¹⁰ *Laws of Indiana*. Chapter 155, Section 3. Approved March 8, 1909.

¹¹ *General Statutes of Colorado*. Chapter 129, Section 7. Approved April 5, 1907.

weekly report. All states require fairly complete records of office work. The nature and amount of statistical information is generally left to the commissioner. When complete social statistics are provided for it is generally stipulated that they shall not be obligatory on the applicant, nor shall such files be open to the general public. When this information is published it shall be presented in such a way as to disguise its source.¹² A favorite statistical requirement is "the cause and duration of non-employment."¹³

The order in which positions shall be filled is mentioned in only a few cases. The Kansas law states that applicants shall be notified of positions in the order of their application. Massachusetts gives preference to "residents of the commonwealth."¹⁴ Rhode Island restricts privilege of registration to residents of the state.¹⁵

Several state laws go into detail as to the management of the local offices. Colorado, Illinois, and Indiana provide that separate rooms shall be given over to the sexes. Minnesota, Missouri, Nebraska and Rhode Island limit the life of an application to thirty days. Several laws require references, but none provides for the use of these references by the bureau. The West Virginia bureau, under the present management, is making a practice of following up references. In those states where an effort is made to place ex-convicts, the past of the applicant is made plain to the employer. Six laws require local offices to cooperate with large employers of labor.

Strike Policy

The great majority of states make no provision as to a strike policy in their laws. The New York law provides that all positions shall be listed with information in cases where strikes exist.¹⁶ The policy of the different states is noted on Table II. The California bill contains no statement in this connection. The

¹² *General Statutes of Indiana, 1911.* Chapter 274, Section 3. Approved March 6, 1911.

¹³ *General Statutes of Colorado, 1907.* Chapter 129, Section 3. Approved April 5, 1907.

¹⁴ *Laws of Massachusetts. Acts of 1909.* Chapter 514, Section 5. Approved June 18, 1909.

¹⁵ *General Laws of Rhode Island, 1909.* Chapter 81, Section 4.

¹⁶ For the wording of this provision see *New York Labor Laws for 1914*, Chapter 181, Article 5-A, Section 66-g.

strike policy occasioned much controversy in the drafting of the Pennsylvania bill. It appears similar to the New York provision.¹⁷

Regulation and Supervision of Private Agencies

California, Connecticut, Illinois and Missouri provide for the regulation of private employment agencies in the same law establishing the state employment bureaus. In all of these cases it may be seen from the comparative amount of space given to the state and private agencies that it was the purpose rather to curb the private agency than to establish an efficient state agency. Most of the other states regulate private agencies through a separate law. Provisions for a system of inspection and reports have proved effective in several instances.

Appropriations

Several state laws provide for the first appropriation for the employment bureau. A few mention subsequent appropriations. Kansas provides \$1,000 and West Virginia \$500. Results in these states are commensurate with the appropriations. Indiana allows \$4,500 for total expenses. Some states leave the appropriation to the general court. The Michigan bureau draws its allowance from the \$40,000 appropriation to the Department of Labor. The first annual appropriation for the New York bureau was \$62,631.66. The proposed California act asks for \$50,000 for the first year.

ACHIEVEMENTS

Some of those who are engaged in the actual work of managing employment bureaus contend that much of the success of the undertaking depends on the powers and control of the bureau. J. T. Fitzpatrick, Commissioner of Labor Statistics of Missouri, strongly urges that the bureau be under the control of one man with broad powers and be independent of all other state departments. A less restricted policy would enable the bureau to undertake several lines of outside work, whose ultimate aim is the prevention of un-

¹⁷ *Definitions.*—Colorado, Connecticut, Illinois, Indiana, Nebraska, Oklahoma and Rhode Island have considered it necessary to define various terms used in their respective acts. The usual terms defined are "applicant for employment," "applicant for help," "person," "employment agency," and "private employment agency."

TABLE II
STATUTORY LIMITATIONS OF

State	General supervision	Personnel local bureau	Bureaus in cities of	Local superintendents	
				Appointment	Tenure
Col.	Deputy comm. bu. of statistics	Supt. Asst. supt.	Over 25,000 Two for 200,000	Commissioner recom. by deputy	2 yrs. Remove "for cause"
Conn.	Commissioner bu. of statistics	Supt.	5 Cities named	Commissioner	Pleasure of commissioner
Ill.	Labor commissioner	Supt. Asst. supt. Clerk	50,000 3 for 1,000,000	Gov. and senate Recom. by board	2 yrs. Remove "for cause"
Ind.	Chief bu. statistics	Supt. Clerk	50,000	Chief of bu. statistics	Pleasure of chief
Kan.	Labor commissioner	Clerk	1st Class 2nd Class	Labor commissioner	Pleasure of commissioner
Ky.	Labor commissioner	Clerk	Capital	Labor commissioner	Pleasure of commissioner
Md.	Chief bu. of statistics	No provision	Baltimore	No provision	No provision
Mass.	Director bu. of statistics	Supt. Asst. Clerks	Selected by director	Director	Pleasure of director
Mich.	Labor commissioner	Direction commissioner	Names 10 cities	Commissioner	Pleasure of commissioner
Minn.	Labor commissioner	Manager	Names 4 cities	Labor commissioner	Pleasure of commissioner
Mo.	Comm. labor statistics	Supt. Clerk	75,000	Commissioner	Pleasure of commissioner
Neb.	Labor commissioner	Clerk	Capital	Commissioner	Pleasure of commissioner
N. Y.	Director emp. bureaus	Supt. necessary assistants	Option commissioner	Civil service	No provision
Ohio	Indus. comm.	Supt. Clerk	5 Districts 1 each dis.	Governor Recom. by commissioner	2 yrs. Remove "for cause"
Okla.	Labor commissioner	Supt.	Capital 2 Branches	Commissioner	Same as comm. Remove "for cause"
R. I.	Commissioner indus. statis.	Option commissioner	Option commissioner	Commissioner	Pleasure of commissioner
S. D.	Secretary Agriculture	Registrar of deeds	County seats	County Registrar of deeds	County Registrar of deeds
W. Va.	Labor commissioner	Option commissioner	Capital	Commissioner	Pleasure of commissioner
Wis.	Industrial commission	Option commission	Option commission	Commission	Pleasure of commission

TABLE II—Continued

STATE FREE EMPLOYMENT BUREAUS

General expense	Social statistics	S. S. records public	Inter-preter	Office records	¹ Policy in case of strike	Preference in positions
Advertise; printing, etc. sec. of state	Option commissioner	No	Yes	Complete	¹ No strike breakers	No provision
No provision	No provision	No	No provision	Complete	¹ No strike breakers	No provision
Advertise; printing, etc. sec. of state	Yes	No	Yes	Complete	¹ No strike breakers	No provision
Advertising	Yes	No	No provision	Complete	No provision	No provision
\$500.00	Yes	No provision	No provision	Yes	¹ "Neutral"	Order of application
					¹ "Neutral"	No provision
Advertise	No provision	No provision	No provision	No provision	No provision	No provision
By general court	As required	Yes	No provision	Complete	¹ Applicant informed	Residents of commonwealth
Advertise; printing, etc. by state	Option commissioner	No provision	No provision	Complete	¹ No strike breakers	No provision
No provision	Yes	No provision	No provision	Complete	¹ Applicant informed	No provision
No provision	Yes	No provision	No provision	Complete	¹ No strike breakers	No provision
No provision	No provision	No provision	No provision	Names, address, work	No provision	No provision
Advertise	Option commissioner	No provision	No provision	Complete	Applicant informed	No provision
No provision	Option commission	No provision	No provision	Complete	¹ No strike breakers	No provision
Advertise	Yes	No	No provision	Complete	¹ No strike breakers	Fitness
Advertise	Option commissioner	No provision	No provision	Complete	¹ Applicant informed	Residents of state, only
Shared by co'ty and state	Yes	Yes	No provision	Complete	No provision	Fitness
No provision	No provision	No provision	No provision	No provision	¹ "Neutral"	No provision
No provision	Option commission	Option comm.	Option comm.	Option comm.	Option commission	Option commission

¹ From "Unemployment," *American Legislative Review*, May 1914, p. 365. Not a statutory provision.

employment, such as vocational guidance for immigrants and juveniles. This is the case in Massachusetts, New York, Wisconsin and other states where the average cost to the state of each position filled seems relatively high.¹⁸

It would seem that in spite of the provisions of the law the results of the local offices are, after all, dependent to a large extent on the qualifications of the superintendent. The superintendent should understand the technical principles involved in his business, the industrial problems of his state and nation, and he should be a capable manager. "He should be depended upon to train the staff, supervise the work and to develop an administrative machine that will be permanent."¹⁹ Can such a man be had for \$1,000 or \$1,200? Certainly not. The result is that the local superintendents are largely unfit political appointments. As a successful western private agency writes—"With a free office, the manager, as far as I have seen, knows nothing about an employment office. He draws his \$1,200 a year. If any jobs come, all right; if any help come, all right; he does not advertise for help or jobs."²⁰ The letters received from these local superintendents reveal both the ignorance and incapacity of all too many of them.

The lesson taught is simple. First the salary must be made large enough to attract efficient men, who should be appointed as the result of an examination and advanced in accordance with the results they produce. The experience of Wisconsin since 1911, under such a system, is sufficient recommendation. New York adopted a similar plan in 1914 at the establishment of its bureaus.

The advisory committee has had a limited but successful experience. It tends to minimize public suspicion and odium that sometimes attach to state labor exchanges. The representation of labor at the councils inspires confidence and secures a certain amount of public coöperation. The suspicion which often exists

¹⁸"We consider that we are fortunate in having no restrictions on our method of managing these offices, and as the Commissioner has the power to issue orders having the force of law, we can handle the work much more expeditiously than if we were hampered by statutory provisions." Extract from a letter from M. D. Hammond, Vice-Chairman of the Industrial Commission of Ohio, dated December 14, 1914.

¹⁹*American Labor Legislation Review*, Vol. IV, No. 2, publication 25, page 323.

²⁰Kenworthy Employment Company, Wichita, Kansas. November, 21, 1914.

in connection with employment bureaus is well illustrated in a letter to the writer from the Secretary of the Muskegon Chamber of Commerce. Mr. Conger writes:

The Manufacturers' division of this association formerly conducted an employment bureau, but it was discontinued because of a growing sentiment among the employees themselves that the division maintained a sort of black list. The charge was absolutely unfounded, but the labor men were firm believers in the theory that if the manufacturers did not maintain a black list there was no reason for running the bureau.

Violent opposition almost paralyzed the Massachusetts employment bureau during the first year of its operation. A broad-gauged superintendent, backed by a representative advisory committee, has a good chance to gain public sympathy.

State aid to municipalities, under certain conditions, has improved the system of labor exchanges in several states. Under such a plan the state probably furnishes the local superintendent, while the city furnishes the offices and clerical help. By such a scheme cities which could do nothing independently join the system to the advantage of themselves and the other members of the system. The heading on the stationery of the Cleveland, Ohio, office, "State-City Free Labor Exchange," immediately suggests such a scheme.

There are a number of items entering into the office efficiency of the labor exchange. The labor statistician of Colorado, Richard E. Croskey, very emphatically maintains that efficiency "cannot be obtained running on an eight-hour basis." He advocates a 6 a. m. to 6 p. m. day and outside solicitors. Stationery from the Springfield and Worcester, Massachusetts, offices announces in a frame at the top that the office hours are from 8 a. m. to 5 p. m. The Boston office, in the same manner, declares 9 a. m. to 5 p. m. to be its hours. Complete records are necessary for efficient work in the local office. Records point out the problems. Incomplete records often make glowing reports. Separate entrances for men and women, as well as one for younger workers, increase the business of the bureau. A further separation of immigrants, clerks, etc., facilitates the usefulness of the work.

Advertising is an important function of the successful bureau. Too often this item is unprovided for. Many schemes have been developed to keep the purposes of the bureau continually before

the public. In a newspaper report, the commissioner of Missouri calls attention to a novel plan adopted by his department. "Every letter-head . . . and all printed matter, with available space extensive enough to be used for that purpose, will carry a display 'ad,' dealing with the scope of the state free employment bureau and emphasizing that the service is absolutely free."²¹ The superintendent of the Denver, Colorado, office reports to his chief that the efficiency of his office could be increased 50 per cent if a reasonable amount were allowed for advertising.²²

During the month of November, 1914, the employment office at Dayton, Ohio, had solicitors visit 109 employers. Coöperation with the employers, secured largely by such means, is an important factor in the growth of the Minnesota offices.²³ These offices placed over 55,000 persons during the year ending June 30, 1914, at an average cost of 17.7 cents. Another item seldom provided for in the laws or policy of state employment offices is the privilege to advance transportation. W. C. Daily, superintendent of the office at Colorado Springs, Colorado, says: "One of the greatest handicaps to a free office is the lack of transportation which the fee office often provides."²⁴ Provisions for an interpreter, messenger service, subscriptions to newspapers and trade journals, and funds for telephone and telegraph messages, aid in establishing the records for the successful offices. Milwaukee has an interpreter constantly at hand, thereby inviting the confidence of the foreign-born laborers.²⁵

The greatest advantage that the state bureau has over the private agency is its possibility for centralization and consequent coöperation. If this feature is neglected there is little justification for the state bureau as a constructive agency. "The eight free employment offices now existing [in Illinois] are doing a great deal, 'tis true, but lacking as we do, a uniform and coördinate system . . . we find ourselves handicapped and discouraged in the successful conduct of our free employment agencies."²⁶ Coöpera-

²¹ Labor Commissioner John T. Fitzpatrick in the *Democrat* of Jefferson City, Missouri, January 2, 1915.

²² Report of Eli M. Gross to the Commissioner of Labor, December 20, 1912.

²³ *United States Labor Bulletin No. 109*. Government Printing Office, Washington, D. C., 1913, page 93.

²⁴ Extract from a letter to the writer, dated December 4, 1914.

²⁵ Report of Wisconsin Industrial Agency for 1914, page 41.

²⁶ Extract from a letter from Luke D. McCoy, Secretary for Commission of Labor, Springfield, Illinois, December 14, 1914.

tion of county clerks and supervisors produced especially good results for farm labor in Michigan during the past year. The tendency towards national coöperation of state employment bureaus is evidenced in the organization known as the American Association for Free Employment Bureaus. Coöperation with several of the departments of the federal government, such as the bureaus of building, irrigation, and harbor improvement, would also aid in a thoroughly organized distribution of labor. President Wilson, in speaking of federal agencies in his Indianapolis speech of January 9, 1915, said: "If I were writing an additional plank for a Democratic platform I would put that in."

From many sources comes the plea for specialization in the state agencies. It is pointed out how effectiveness is secured among Chicago's three hundred private agencies by a division of the field as regards kinds of positions. Each of the three state offices in Chicago covers the whole field with a comparatively small force, and is consequently a poor competitor of the private agencies. Specialization is intensively developed at the Boston office by Superintendent W. L. Sears. The central bureau in Kansas is unable to operate an extensive system due to the meagerness of its appropriation and has therefore confined itself principally to placing harvest hands during that season. W. L. O'Brien, Commissioner of Labor for Kansas, estimates that his bureau placed 60,000 men during the harvest season just passed. The allowance for this work was \$1,000. Missouri offices placed 16,436 men in the harvest fields of that state during June, July and August, 1914.

Special work undertaken by many of the state offices includes settlement of claims for employees, prosecutions under the law, vocational guidance, juvenile work in schools, finishing schools, advising immigrants, securing harvesters in western states, and the inspection and prosecution of private agencies. During the year 1911-1912 the Colorado Springs office settled 1,546 claims, involving \$45,620.83, without any cost to the wage-earners. Vocational guidance for children and immigrants guards against exploitation, "blind-alley" occupations and unemployment.

An idea of some of the evils of unscrupulous private agencies is given in the 1914 report of the Department of Labor and Industries of Minnesota.²⁷ The number of complaints and the cause of complaint is shown in the following table from the report:

²⁷ *Fourteenth Biennial Report, 1913-1914, part 7, page 170.*

Failure to secure employment.....	54
Misrepresentation by agency.....	20
Misrepresentation by employer.....	15
Unwarranted deductions from wages.....	9
Failure of employer to fulfill contract.....	11
Soliciting help without a license.....	6
Attempting to collect additional fee.....	2
Withholding baggage.....	1
Extortion.....	1
Fee splitting.....	1
Sending to positions without an order.....	1
Total.....	121

In reporting to the United States Department of Labor as to the charges made for registering applicants, securing positions and securing help, a private agency of Baltimore answered, in each case: "All I can get." Collusion between the agent of the large employer of labor and the private agent, induced by a splitting of fees, leads to many disgusting practices. D. M. Lyman, superintendent of the municipal office at Seattle, Washington, states that private agencies have become so interlocked with contractors and large employers of labor, that it is almost impossible for a laborer to get work in some western states without paying for it.²⁸

Illinois provides a \$3,600 inspector with several \$1,500 assistants for regulating private agencies. During 1913 this state prosecuted 50 cases, securing 48 convictions. All private agencies, however, are not of this type. During 1911 the Illinois bureau received complaints from 92 private agencies, while 217 were free from complaint. This is, of course, not conclusive proof that no evil practices existed in the 217 cases. The director of the bureau should have, as he has in some cases, the power to suspend and revoke licenses of private agencies on his own authority, after a public hearing.

The policies that have developed in the various states in regard to supplying strike-breakers are presented in Table II. The best policy seems to be that outlined in the tentative proposals of the United States Commission on Industrial Relations,²⁹ as on pages 182-183.

²⁸ In a letter of December 14, 1914.

²⁹ Washington, D. C., May 5, 1914, page 12, section 36.

Any association of employers or workmen may file at a public employment office a statement with regard to the existence of a strike or lockout affecting their trade. If any employer who appears to be affected by a statement so filed applies for workers at an employment office maintained by the bureau, the superintendent shall inform him of the statement that has been filed and give him an opportunity of making a written statement thereon. No superintendent shall refer any applicants for employment to such an employer without informing them of the statements that have been received.

Cost figures per position secured are often misleading. The total cost of the office depends largely upon the amount of social work performed, for which no direct result is apparent. Some offices, because of the nature of the industries among which they are placed, supply a great amount of short time work. The Industrial Commission of Wisconsin reports that of the 25,205 positions secured during the years 1913 and 1914, 8,556 were short jobs.³⁰

The causes for the failures among the state bureaus are easily discovered. In the first instance it is due to the appropriation. A small appropriation is worse than none; it accomplishes no results and is an inducement to corruption. Kansas, with its \$1,000 makes an effort to attract men to harvest its crops during three months of the year. The West Virginia bureau, backed by a \$500 appropriation, is inactive. In Nebraska, where the Governor serves as Commissioner of Labor, the bureau is inactive. No appropriation is provided for in the law. South Dakota has a law, passed 1913, but no appropriation has been provided and the bureau is inactive. Maryland, starting out in a half-hearted way with one office at Baltimore, dwindled until, in reply to an inquiry, the Bureau of Statistics and Information writes, under date of December 31, 1914: "I would say that the law authorizing this bureau to maintain an employment exchange has never been more than a mere statute." The appropriation is the first essential. Proper funds, managed correctly, will attract a capable personnel, which is the second *sine qua non*. The municipal offices, operating independently, are naturally limited in resources and achievements. The Newark, New Jersey, office is in charge of the city clerk and operates mostly by "want ads" and circular letters. The municipal office at Seattle, Washington, is noteworthy in its phenominally low cost per position

³⁰ *Biennial Report of June 30, 1914*, page 42.

TABLE III
ACHIEVEMENTS OF STATE EMPLOYMENT BUREAUS

State	State appropriation	Expense account	Directr. salary	Supt. salary	Offices	Advertising
Col.	\$9,800.00	\$9,800.00	Charge of deputy commissioner	\$1,200.00	4	\$20.00
¹ Conn.	\$9,000.00	\$8,765.12	Charge of comm. labor	\$1,200.00	5	\$100.00
¹ Ill.	\$44,145.00	\$43,118.90	Charge of director labor states.	\$1,500.00	8	No acct.
Ind.	\$9,000.00	\$8,669.30	Chief Bu. Statistics	\$1,200.00	5	No acct.
Kan.	\$1,000.00	No separate acct.	Charge of comm. labor	\$1,000.00	1	Nothing
⁶ Ky.	\$1,800.00				1	No acct.
³ Md.						
Mass.	\$36,350.00	\$33,901.68	Charge of director statistics	\$1,200.00 to \$1,800.00	4	\$627.17
Mich.	General for dept. labor	Approx. \$9,000.00	Charge of comm. labor	\$1,000.00	5	Nothing
² Minn.	\$10,000.00	\$9,799.58	Charge of comm. labor	\$1,100.00	3	Nothing
Mo.	General for dept. labor	No separate acct.	Charge of comm. labor	\$1,200.00	3	\$100.00
Neb.	General for dept. labor	No separate acct.	Charge of comm. labor		1	No acct.
N. Y.	\$62,631.66	\$62,631.66	\$4,000.00	\$2,000.00 (graded)	5	5% expenditure
Ohio	General for indus. comm.	Approx. \$20,000.00	\$1,500.00	\$1,500.00 to \$1,800.00	5	\$25.00
⁷ Okla.	\$4,100.00		\$1,200.00	\$600.00	3	No acct.
⁶ R. I.	\$4,000.00	\$4,000.00	Charge of comm. labor		1	No acct.
⁶ W. Va.	\$1,200.00	\$1,200.00	Charge of comm. labor	\$1,200.00	1	No acct.
² Wis.	General for indus. Comm.	\$8,888.16	Charge of indus. comm.		4	

¹ Year ending Sept. 30, 1914.

² Year ending June 30, 1914.

³ Operations under the law abandoned entirely in 1914.

⁴ Operation too recent for figures of value.

TABLE III—Continued
FOR THE YEAR ENDING DECEMBER 31, 1914

Amount transportation	Special work	Applicants	Successful	Cost per pos.	% males	Private agencies	Regulated
None	None	2 yrs. 68,346	2 yrs. 46,081	42½¢	72	42	Yes
None	None	14,483	7,284	\$1.20	49	54	Yes
None	Vocational guidance, etc.	102,285	66,613	65¢	68	325	Yes
None	Coöperate with county agents	^a approx. 40,000	^b 30,195	50¢	78	17	Yes
None	Harvest workers	1,140	716	No rec.	90	19	Yes
None	Coöperate with country banks	2,193	1,120	\$1.63		No rec.	Yes
None	Vocational G., placing handicapped.	No record	24,710	\$1.38	54		Yes
None	None	No record	15,366	58¢	66	25	Yes
None	None	No record	55,135	17.7¢	50	100	Yes
None	Assist. destitute; stand. brd. house etc.	No record	27,590	No rec.	90	67	Yes
No acct.	None	No record	No record	No rec.		No rec.	Yes
None	Juvenile labor vocational guidance school registration etc	4	4	4	58		Yes
None	Immigration. voca. guid. place handie.	7 mos. 192,379	7 mos. 33,170	est. 38¢	68	45	Yes
None	None	23,159	13,294	37¢		approx. 40	Yes
None	Voca. guid. by manager	3,029	2,386	\$1.67	49	"Very few"	Yes
None	None	2,205	1,936	61¢	74		No
	Immigration voca. guid. etc.	51,997	25,205	35¢	78	39	Yes

^a For the year 1912. Commissioner gave no figures in 1914 report.

^b For the year 1913.

^c For the year 1909-1910.

^d For the years 1912-1914.

S. Dakota passed an act providing for state employment bureaus in 1913 but no appropriation has as yet been provided.

filled. Since 1908 it has not reached 6 cents, touching the low limit of 4.18 cents in 1909. During that year 38,846 workers were placed.

The national bureau has not collected any figures from which to judge of its effectiveness. The chief of the division in this department writes, March 13, 1915: "Since the work is in the formative stage and much of the work experimental as to detail, statistics bearing on the same would fall short of being illuminating or of practical value just now."

There is a general expression from all sections of the country that the recent business depression has had a decided effect on the results of state employment bureaus during 1914. In many cases the previous steady growth in business has been decidedly retarded.

The history of the public employment bureau in this country has not been a particularly bright one. Nor has it been a long one. We have hardly had sufficient experience in this new line to develop a marked efficiency. We are just beginning to have men who are trained in the work. Then, too, the immediate cause of the bureaus in many states, political rewards did not prophesy a particularly efficient future. The financial backing has been, in almost all cases, insufficient for a useful and growing bureau.

A national system of centralized and coöperating exchanges, towards which we are rapidly working, will form a very efficient machine for keeping our reserve labor supply at its minimum. But the bureaus are merely distributive agents. They gather the information and point out the opportunities. They do not create jobs. They are the first step in the solution of the problem of unemployment, a problem which is rapidly becoming a national question. The facilities afforded by a comprehensive system of exchanges, and the data which they would collect in a few years, would form the basis for the information and regulations looking toward regularization of industries, shifting of help among the seasonable occupations, and the correct treatment of the unemployables—the real solution of the problem.

PUBLIC BUREAUS OF EMPLOYMENT

BY CHARLES B. BARNES,

Director, New York State Bureau of Employment.

The subject of public employment offices just at this time is attracting a great deal of attention. This is in the main due to the large amount of unemployment throughout the United States. Unemployment in this country has gradually reached a chronic condition, through many causes which are not pertinent to discuss here. But just now we are in an acute stage, due to financial depression, the European war, etc.

All sorts of agencies are attempting to solve, or else offering a solution for, this condition. Naturally, public employment offices suggest themselves as a remedy. The present agitation has its good and bad sides. It is well to bring the subject of public employment offices to the fore, but too many people regard them in some vague way as a remedy for an acute situation, without realizing that public employment bureaus are an institution which can only be beneficial through the realization by employers and employees that they are a necessary and integral part of our industrial life. This realization has got to be a matter of growth, and will necessarily be slow. If public employment offices had been generally established in all the states twenty-five years ago, and had been carried forward with a true understanding of their work, they would today have been in a position to point out some remedies for the present situation.

A few of the states have had public employment offices for several years, and at the present time there are nineteen states which have public employment office laws, while in seven other states there are cities which have established municipal bureaus. There has, however, been no coöperation between these different bureaus, and in some of the states having several offices there has been no coöperation between the several branches in the state. In all these states the offices have been handicapped by the lack of appropriations, lack of realization of their true function, and because they have to a large extent been regarded as a political

asset. Only in four states are they under civil service, and in these the best work is being done.

The public generally has rather a low regard for employment offices of all kinds, and too often public employment offices have been regarded merely as places to handle common labor, or else to cater to the unemployable or near-unemployable. With this wrong impression as to their true use and value, appropriations were consequently very low. The same attitude toward them led to the belief that anybody, regardless of character or ability, could run an employment office. For this reason, superintendents who secured their offices in payment for political services, were too often men of limited capacity and with no very high conception of the work to which they were appointed. All this has caused this vital and necessary part of our industrial system to languish and receive little or no attention.

One of the things which indicates a revival of interest in the subject is that the matter is now being considered from a federal standpoint. Already two bills have been introduced in Congress for the establishment of a federal employment bureau. In addition, the United States Industrial Relations Commission issued, about a year ago, a tentative plan for a federal bureau, and in connection with this tentative plan a study was made of the different state employment offices now existing. This led the commission in their first report to emphasize the need of a national bureau of employment in connection with the labor department, which would coöperate with state and municipal employment offices, which would regulate private employment agencies and which would establish clearing houses for industrial information, thus uniting all public employment offices into one national system. The report refers to the imperative necessity of organizing a market for labor on a modern business basis, "So that there will be no vacant jobs and idle workers in the same community at the same time." An attempt has been made to utilize the post offices throughout the country as public employment offices. Only those who know the highly technical character of the work carried on in an employment office will understand how little can be accomplished through the post office as an employment agency.

Before public employment offices can accomplish the best results in this country, the public generally will have to be educated

to their true use and value. The experience of Germany and England has shown how real is the need for a coöperative system of public employment offices covering the entire nation.

There is in this country no organization of the labor market, and very little is known about it. In times of industrial depression all sorts of wild guesses are made as to the number of unemployed in the large cities and there is generally a demand for a "census of the unemployed." This it has always been found impossible to take accurately, and in the end each city falls back upon an estimate and hesitates about what shall be done to relieve the unemployment, because of the lack of accurate information as to the extent and character of it. We are now conceiving the possibility of registering those out of work according to their industry and trade.

The number of casual workers and those who drift about in a constant state of under-employment is greatly increasing. There are many causes for this, and the public employment offices can assist in checking this increase in two or three very definite ways.

Many thousands of dollars are spent in educating the children of the different communities. After receiving this education they are turned out of the schools at any time from their fourteenth to their twentieth year and allowed to hunt their vocation in life without well defined or intelligent direction. The child may turn to its parent, who has very limited knowledge as to the industries of his community or the country at large. If the child turns to its teacher it finds but little more help here, and so in a haphazard fashion it secures a "job." There should be in every community a central point to which the child could turn to learn all about industries, all about opportunities in staple trades and new lines of business, to know which were decaying trades, which were "blind-alley" trades and what vocation was best fitted to its education and temperament. To thus save the child from misdirection would cut off one source of supply to the great stream of casual workers. Public employment offices should also be able to give accurate information to vocational and trade schools as to what should be taught in them to meet the coming needs of the various industries. Another way in which the public employment offices could help to lessen the number of casuals would be in helping to shift workers in seasonal industries from one work to another.

Many trades and industries can be, or are, carried on for part of the year only, and when the workers leave one trade they have no central point where information can be had concerning some other trade in which they could be employed for the rest of the year. Lacking this, they drift about and soon become members of the great body of under-employed.

The under-employed and casual worker is also recruited from the ranks of those who have vainly striven to find work in their own particular trades. Barring the drug habit, there is probably no other thing so depressing to a man as the weary hunt for a job—the being turned away day after day from factory gates and offices. After a few weeks of this sort of thing, men, who under ordinary circumstances would be good and steady workmen, gradually get into such a depressed state that at last when work is found they have become unfitted to do it. Our bread lines contain many men who have gone down under this sort of depressing search.

A man seeking work today finds many avenues through which to obtain it. The most common way is to apply at the actual place of the work. This means tramping the streets of the city or riding to many parts of the community where work is going on. Or the man may answer an ad in the newspaper and find himself in line with many hundreds of other applicants. Or he may insert an ad in some newspaper and go the weary round in answer to the replies. If he is a union man he can apply to the headquarters or to the business agent of his union. If he is a non-union man, or is not opposed to working in an open shop, he can apply to the employment bureau of an employers' association. If he has a family to support and has reached the point of asking charity, he may be referred to the employment office of some charitable association. If he has a little money he may go to a private employment agency. Here he may be charged a registration fee, and if, after some delay, he is finally placed in a position, he will be made to pay anywhere from five to twenty per cent of his first month's earnings. So many varied ways cause a scattering of energies and a loss of time and money, not only to the employee and employer, but to society as a whole. The method is as primitive as the ox-team, and the inefficiency and waste is very great.

To better this method the public employment offices were created. But it must be remembered they do not and cannot

create jobs. They only seek to minimize the number of persons fruitlessly searching for work, and more quickly to bring employer and employee together. It is nevertheless true that as these public offices grow, and more and more cover the field, they in time will (through the information which they are gathering) be able to devise a method—by legislation, if necessary—whereby the worst effects of seasonal and cyclical variations in the labor market can be avoided and labor properly shifted from one part of the country to another, in compliance with a real demand for such shifting. Thereby the number of casual workers will be decreased and year-round employment made less a matter of chance and "luck."

Too much must not be expected from newly established offices. They are as yet in the "little red schoolhouse" period of their existence. It must be remembered, too, that the work in an employment office is of a highly technical character, and that there are at present very few trained workers in this field. One of the benefits of these offices will be the training of a set of workers who eventually will be capable of dealing adequately with the question of unemployment—workers who come in contact with the needs of industry on the one hand and the needs of applicants for positions on the other. It is not every man, even though he may be well trained in other lines, who can get from an employer the full description of the kind of worker wanted, and who can take that order in hand and select from the individuals in the line in front of him the one who is best fitted to fill all the demands of that position. It takes, too, a very tactful person to question the sometimes reluctant applicant for work and get from him all the information about himself necessary to know before he can be fitted into the position. Then further, public employment offices have quite a task before them in establishing themselves in the confidence of large employers of labor, and especially employers of more or less skilled workers. So general is the belief that public employment offices only handle the poorer grades of labor that most employers refuse to seek their aid. This feeling, of course, brings a disinclination on the part of efficient workers to patronize these offices.

In connection with the popular misconception of public employment offices, it might be well to call attention to the fact that the word "free" should be eliminated from all references to them. It is true their services are free, and so also are the services of the

public school. We have, however, long since outgrown the use of the term "free" in connection with the public schools. Why should we still retain it in referring to the public employment offices, and thus in an indirect way give them the odium of charity? Further, it is well to remember that these offices are just as important as the public school, and should be conducted by people with just as high qualifications as to character, ability and intelligence as are required of those who teach in our high schools and colleges.

There is now considerable discussion among those interested in public affairs concerning the regularization of industry and the establishing of unemployment insurance. Through the study of industry, which the public employment offices will have to make while carrying on their daily work, information will be gathered of great value to those who seek to regularize industry and to minimize the amount of seasonal work. If unemployment insurance is to be established it can only be worked through a coöperating system of public employment offices.

During the year 1914, the writer made a study of the public employment offices throughout the United States for the United States Industrial Relations Commission. For the past few months he has held the position of director of the state bureau of employment of the state of New York. This experience leads to the making of some suggestions to those states about to establish public employment offices, or to those desiring to improve offices already in existence.

In the first place, an adequate law will be necessary which will not enter too much into details, but which will specify only general principles, leaving details to be worked out by those placed in charge of the bureau. Such a law should call for flexible salaries, so that all employees should have the incentive of an increase in wages. Civil service should be required for all the office employees from top to bottom. Present civil service regulations and methods are, however, in most states too formal and inflexible. An ideal examination for public employment office workers should above all things take into consideration the importance of personality in selecting superintendents and other helpers. Dealing with all sorts of people requires a sympathy and understanding and a tact which is not possessed by many otherwise able persons. To insure the selection of properly qualified workers,

the director, whether of state or national bureaus, should always be a member of the examining board. Strict impartiality should be maintained as between employers and employees, especially during strikes and labor disturbances. The offices should be so conducted that neither side would have a dominating influence. Their success will depend on the friendship of employers and of organized labor, and both should be made to understand that the public employment office is a common meeting ground. It would be well for all the offices to have advisory committees. These committees should have equal representation from the ranks of organized labor and from the organizations of employers. It might also be well to have the general public represented through some of its elected officials. These committees, in addition to their main function of securing impartiality and the proper running of the offices, should also be instrumental in helping to educate the general public into a higher regard for employment offices.

The establishing of public employment offices is a part of the duty of the state (and in time it may become the duty of the federal government). At the same time offices can be better conducted if there is coöperation on the part of the cities in which such offices are located. Where the cities have a financial interest in the public offices, there is more likelihood of a hearty local interest in their success. The different offices in any one state should have a uniform system of records and a uniform system of reporting to some central bureau. The amount and kind of statistics furnished by each office will have largely to depend upon the number of workers allotted to it, and this number will, of course, depend upon the amount appropriated for the entire bureau. At the very least, however, there should be a daily report from each office of the number of applicants for work, the number of offers of positions received from employers, the number of applicants referred to positions, and the number of notifications received that positions were actually filled.

All offices should have at least two main divisions, one for men and one for women. Where the number of office employees justifies it, there should be a further division into skilled and unskilled, and as the office grows larger there should be still further division into mechanical, clerical, etc.

All budgets for employment offices should contain an item for

advertising. The amount and kind will have to be decided by each superintendent. Private agencies find it profitable to advertise and some of the best public offices advertise regularly in the daily newspapers. Then, too, nearly every public office has an opportunity to get much free advertising. Live employment offices are always a good source of news from the daily newspaper standpoint, and advantage should be taken of this to keep the office well and favorably known. No office should content itself with sending out a few cards or circulars, which are too often thrown into the waste basket.

In selecting superintendents, care should be taken to secure men of intelligence and character, men active and tactful. It should be the duty of the superintendent of each office to set aside a certain number of hours a day or a certain number of days a week in which to visit all the industries of his community, so as to get acquainted with the kind of workers demanded in the different trades. When an office becomes large enough the superintendent should be practically free from all the detail work of the office, and should spend most of his time out in the field becoming thoroughly acquainted with the proprietors of the various industries and foremen in charge of the workers. He should make them well acquainted with his office and seek to show them what it could do for both employer and employee. By thus getting fully acquainted with all the work of his community the superintendent would come to know the seasonal and varying demands of the labor market in his jurisdiction, and could prepare his office to meet impending changes in this labor market. It should be his duty to see that his subordinates properly fill the orders which he secures from employers and to know something about the way in which employers treat their employees. By thus taking a vital interest not only in the workers sent to positions, but also in the needs of employers, he would in time win the confidence and good will of both.

The law establishing the bureau of employment in the state of New York was approved in April, 1914. The director of the bureau was not appointed until the latter part of that year. The first office was established in Brooklyn on January 4, 1915. Since that time, at intervals of a few weeks, offices have been established in Buffalo, Rochester, Syracuse and Albany. Others will be

established from time to time. The offices have, of course, been established too short a time to speak about the effect of their workings. It can, however, be said that the offices outside of Brooklyn are placing a large number of farm hands. Also, that all of the offices are handling a large amount of skilled help, much larger than might have been anticipated considering that the general idea concerning public employment offices is that they are designed only for common labor. If domestics are excluded from those placed in positions, more than 60 per cent of the places filled would belong in the class known as skilled labor. Up to this time (April 1) all the offices throughout the state have registered over 16,000 applicants for work, and have received calls from employers for over 3,400 workers. Reports have been so far received that over 1,500 of these workers were placed in positions. It must be understood that in making up these statistics no place is reported filled unless actual information is secured to that effect. A considerable number of places are in all probability filled which cannot be reported on for lack of definite information.

No printed bulletins concerning the work of the offices have yet been issued, but multigraphed bulletins have been issued at the end of each month, giving a detailed statement of the work of the offices as copy for the daily newspapers. In connection with the bureau of statistics the bureau of employment is preparing to issue a monthly labor bulletin. This bulletin will be made up from information from several sources. It will include the data from the public employment offices, data from private employment agencies, data from a certain percentage of employers in each industry in the state, the reports from labor organizations and the reports of building permits issued in each city in the state.

CASUAL AND CHRONIC UNEMPLOYMENT

BY MORRIS LLEWELLYN COOKE,

Director, Department of Public Works, Philadelphia.

“Unemployment.” In the one word is summed up a problem of tremendous importance to any industrial city. It is moreover a problem to be faced by our generation. No other obstacle to our growth as an industrial nation is less likely, however, to be successfully combated unless our leaders—industrial, educational and religious—keep our attention focused upon it. On the other hand, it can be confidently asserted that there is no one of the unfortunate conditions of our industrial life more possible of control than this one, if manufacturers, educators, the laboring class, and others interested will so view it.

There should be excluded from the present discussion the type of unemployment resulting from “hard times,” changes in the tariff, or world-wide fluctuations in trade. We have in mind rather what might be called chronic unemployment and casual employment. Even during good times, and of course to a greater degree during average and poor times, there is a large amount of actual unemployment of types and due to causes that are almost ignored in popular discussions of the subject. It is to these phases of the problem that special attention should be directed.

There has of late been much talk about employment bureaus, private, municipal and state, and even national. There is an important field for such agencies if they can be organized in harmony with democratic ideals. They are at best, however, only mitigating agencies and cover but a small part of the whole field. Such agencies will be principally of use as emergency measures during those times when conditions of trade are upset.

We in the United States have progressed far enough along the path of civilization to make it advisable in discussing such problems as this to put the emphasis on what happens when conditions are normal. We have great sympathy for those who are thrown out of employment by changes in national policy or by the invention of new machines, or by other unusual causes over which neither

the worker nor the employer has much control. The object of this paper, however, is to call attention to the fact that the great burden of unemployment under which this and every other industrial center groans is due rather to the blindness of individuals, to tradition, to lack of organization, and other causes, which, if studied, can very largely be removed. Such a study should enlist the interest of the employing class as well as those they employ. We are too apt to look upon anything like the unemployment problem that is fundamentally troublesome in industrial conditions as due to what are known in insurance circles as "Acts of God." We accept such conditions as having been imposed in the general scheme of things and not to be successfully combated. We do not realize how largely we human beings are responsible for what is wrong.

There has been going on in this country, for a number of years past, experimental work in this field, which would indicate that practically all of the burdensome chronic unemployment can be prevented if we make up our minds we are going to do it. Let me give just a few examples of the kind of unemployment I have in mind:

Molly Brown is engaged on piece work and has been in the habit of making eight dollars a week. If during the first four days of the week she is given what are known as "fat jobs" and has already earned her eight dollars by Thursday night, the forewoman sees to it that she gets little or no work on Friday or Saturday. Why? Because if Molly should earn nine dollars or perhaps ten dollars at piece rate this week, the forewoman is afraid that she will begin to rate herself as a nine dollar or ten-dollar girl and that would be troublesome. The net result from an economic standpoint is two days of unemployment.

Again, in certain textile mills, it is the practice to carry on the pay roll a larger number of men than can be given work at any given time. This is done usually from two motives. The manufacturer wants to be sure of his help when he needs them for getting out orders. On the other hand, he has a kindly interest in his men and feels that to keep a certain number of his men on part time is better than actually to discharge some of them. In both attitudes it seems to me the manufacturer is mistaken. Through lowering the average net pay of his employees, he reduces the efficiency of his plant. On the other hand he demoralizes the workers through

training them to casual or interrupted employment. This practice is so general in some communities that a large percentage of the workers are incapable of continued employment. After they have been engaged for a certain number of weeks, or at most, months, they have to lay off. They cannot stand the strain of even a relatively short work day if continued week after week. Certain other manufacturers who do not like the idea of laying men off for whole days at a time or even one day, accomplish the same result by shutting down one or more departments early in the afternoon. Of course, the net result is the same. It would be a good deal better both for the manufacturer and his men if the number of employees should be kept chronically below rather than above the number to whom full time can be paid.

Another cause of unemployment is what seems like a wrong conception of the relations between selling and manufacturing. During the last twenty years the importance of selling as compared to manufacturing has been apparently greatly exaggerated. The selling end usually controls. The thought seems to be that the operations of the selling staff at any one time are limited. But there goes with this the assumption that whatever the selling staff can accomplish must be met by the manufacturing end of the business and this whether it involves cutting the output in half or doubling it. It may mean doubling the number of employees engaged on manufacturing and making them work time and half time, or it may mean discharging half the employees. The attitude should be that both the selling and manufacturing arms of a business should have like opportunities but like responsibilities. The selling force should be so organized that they can keep the manufacturing side going, so that day to day, week to week, and month to month, fluctuations in the number of employees do not occur. Obviously, this is not a problem in which a 100 per cent result can be obtained, but in many establishments, with which I am familiar, overtime has been practically cut out and rush seasons have disappeared.

In one shoe concern they have a special department which during dull seasons makes standard lines at a somewhat reduced cost. These goods are disposed of through special selling agencies and are manufactured only in order to equalize the load, and to keep men employed when otherwise they would be laid off. This

same concern has six men in the field in different parts of the world studying and trying to anticipate as far ahead as possible the demands of the market. These men do not sell. They simply observe trade conditions in order to get the earliest possible notice of either a heightened or lowered, or changed demand. This reduces the amount of unnecessary manufacturing. It notifies employers long in advance of forces operating toward a change in the number of employees in any department or in the establishment as a whole. It frequently happens that these forces when anticipated can be counteracted. It is almost impossible to conceive that under good management there is any necessity for such violent changes in the number of employees as we saw in Philadelphia during the winter of 1913-1914. Some years ago in Philadelphia one concern operating in a standard line had approximately 19,000 employees on January 1 and between 8,000 and 9,000 employees working part time six weeks later. Lack of organization could be the only possible excuse for such a tragedy. It would be indeed a wonderful industrial community that could absorb men laid off at any such rate as this.

The study of this problem in the shoe concern above referred to has been going on for ten years. The concern had an output last year of considerably over \$10,000,000 and is very successful. While in the shoe trade generally eight to ten weeks a year is considered a conservative estimate of the period of unemployment, this concern has reduced it, through its studies, to less than five per cent, which includes the regular vacation period allowed every employee.

Another cause of these more insidious types of unemployment is the fact that most workers know how to do but one thing. When I served my apprenticeship as a machinist, I was associated with men who were boring mill hands, lathe hands, vise hands, or something else. In other words, they secured their livelihood by operating practically one type of machine. Obviously, when there was no work for this particular type of machine they were laid off. In some of the industries with which I have been associated since that time, there has been created the organization for teaching people how to do as many things as they are capable of learning. If work of one kind runs out, they can be shifted on to something else. Notwithstanding the general impression to the contrary,

there is no reason why this scheme cannot be practiced as a part of the shop procedure which the labor unions hold is the best adapted to promote the prosperity of the worker. There must be the broadest possible assurance that this will never be done in order to cut wages. Good faith in this as in every other matter is at the root of high efficiency. In one establishment that I know, owing to this coaching in doing more than one thing, none of the women employees was laid off for an hour during the year 1913. The entire force was kept engaged. There had accompanied this change an average increase in wages among the workers affected of about twenty per cent. One concern which does not believe in welfare work employs a factory nurse. Her work costs \$1.69 per employee per year. Her main job is to keep the workers well so that they can make full time. Will any one question that she is a good "buy"? I know three small concerns in a small town who jointly employ a nurse.

Every country in the world is discussing the minimum wage. Invariably the discussion hinges on the proper amount to be paid a man or a woman for a week's service. I want to submit that it will not be many years before this will give way to a discussion as to what constitutes a proper annual compensation for men and women. After all, what I am interested in is my annual income. This is the vital thing with my fellow-workers in every grade. You can give a man or woman \$20 a week, but if you employ him only six months in the year and he is unable to secure employment from anybody else for the remainder of the year, his actual weekly income is \$10. This is an extreme case but everyone can suggest abuses in his own experience which illustrate the principle. The manager of a concern employing 800 employees told me recently that he had given orders that he should be shown at the end of each quarter the average weekly wage for the entire quarter of every employee, and he expects to see the same thing at the end of the year. This employer feels that his employees are to be permanent employees. They are members of his industrial family, in whose prosperity he is vitally interested. He has reached the conclusion inevitable under scientific management that if he is going to be prosperous, he must pay high wages and have high-class people working for him. He must make quite an investment in educating every such employee. It is to this employer's interest to hold this

asset in his own employ. It is to the interest of the worker so educated to stay where he can make the most of his accomplishments. On the other hand, I have before me the case of an employer who retires his entire staff once in every two years. Efficient management under such conditions is impossible. The lower the class of labor the less the importance which seems to attach to permanence and continuity of employment.

To sum it up, it would be a great and good thing if some citizen or group of citizens would establish a university chair or chairs on unemployment, the function of which would be to organize a study of the causes of both the chronic and the exceptional types of unemployment and make suggestions to our manufacturers and workers as to the best means of reducing it.

Inasmuch as the problem of unemployment is absolutely tied up to that of efficiency, and interwoven with it, it is one that will have to be solved. Those industrial communities that do not bear their part in its solution will inevitably suffer the consequences. A successful outcome will only be possible if the work is undertaken as a joint responsibility of both the employers and their men. Both sides must bring to its solution the broadest spirit of sympathy and zeal.

PROFIT SHARING AS AN INFLUENCE IN INDUSTRIAL RELATIONS

BY A. E. PFAHLER,

Late Member, Abram Cox Stove Company, Philadelphia.

The sharing of profits with employees, whether in the form of a bonus for super-efficiency, distribution of net gains in proportion to wages and salaries, or dividends upon shares of capital stock, has long since passed the theoretical and experimental stage and has already played a conspicuous part in numerous colossal industrial successes, and whether by accident, or which is more likely the case, as a natural consequence, a greater degree of harmony and contentment exist in establishments where it is to be found than in others where such practices have not been inaugurated.

Of the many forms of profit sharing now in force the most common and least complicated is the sale of shares of capital stock to employees who have been in the service for a certain length of time, and whose record shows loyalty to and interest in the enterprise; or the setting aside each year, when earned, a certain proportion of the net profits to be distributed to the workers who have complied with fixed requirements as to term of service and coöperative spirit, in ratio as their respective wages bear to the whole payroll.

The first method, except in the case of companies having shares of the par value of \$1.00 or \$5.00 (and these low par values are becoming popular now-a-days because they facilitate wide distribution), necessitates an arrangement on the part of the company to sell the shares on the partial payment plan taking the obligation, interest-bearing of course, of the purchaser and crediting all dividends and payments until the whole sum shall have been paid, at which time the shares may be transferred to the name of the employee. In the case of a company whose shares are not listed upon any stock market the company must stand ready to purchase back the shares when offered.

The second method requires only the fixing of some percentage which seems fair to all and then applying it to each year's net

profits to determine the amount for distribution. Usually such distributions are made just prior to the Christmas holidays.

In both plans it is most important that the employees be obliged to serve the company for a period of months or years and with a proven degree of faithfulness before being permitted to participate in any profit-sharing arrangement.

Is profit sharing a preventive for all conflict as between the employer and the employed?

Will profit sharing ensure justice as between the worker and the works management?

Can the evil of unemployment be mitigated by profit sharing?

These and many other questions arise in the minds of those who have given little thought to the subject and have not until recently noticed the rapidity with which sentiment is changing in this field.

If the division of gain or the distribution of benefits, and that alone, is depended upon to bring an affirmative answer to these questions, disappointment awaits whomsoever expects so much, for that would be too great an accomplishment for which to hope; but if coupled with other logical, reasonable, do-unto-others-as-you-would-be-done-by relations, great progress can be, in fact in many instances has been, made toward a condition of peace, contentment and more lasting and universal prosperity.

It would be incorrect and misleading to say that all establishments, where profit sharing had been adopted, were successful to a greater extent than their neighbors where it had not; for like a piece of machinery, it, to be efficient, is the result of scientific observation and must be thoroughly understood and properly applied. The executives who call their employees together some January first and announce the new order of things, never again referring to it, expecting the seed to sprout unwatered and the crop to mature uncultivated, are sorely disappointed and firmly convinced of what they believe to be the fallacy of a theoretical scheme to take from them hard-earned profits giving nothing of value in return. As a matter of fact the trouble lies in their failure to properly apply the principle.

The warden of one of our large penitentiaries says that fewer mechanics come under his care than any other class of society; and that of the criminals who are paroled or dismissed, those who dur-

ing their confinement have learned a trade seldom are returned to jail. "I am positive," said he, "that were every boy able to find the tool in which he could become interested and with which he would love to work, there would be a smaller number of inmates in our prisons."

This testimony from one who knows from long experience strengthens the belief that the desire to do wrong is not basic in the minds of the majority of workers, but rather the result of failure to be guided into the right path of usefulness at the start, and suggests the thought that if love of a tool could be coupled with the desire for accomplishment of profitable work, a great economic force would be kindled; and from thinking of how little work would win the daily wage, men would turn to the thought of how to so increase the productivity of their efforts that the general gain might be greater and their share thereof be larger.

In works where wages and compensations are fixed arbitrarily with no tangible recognition given to him who displays the greater intelligence or exerts the greater effort, and where no attempt is made to compel an understanding that as the success of the whole increases that of the individual worker must as well, and where as the business grows and profits increase the only evidence which meets the eye of the employee is the added display of wealth on the part of the owner and the lengthening of his vacations; in such places no one but the "Old Man" has a vital interest beyond the contents of the pay envelope at the end of the week, and the business is almost certain to dwindle after he passes on.

A great deal of the strife and conflict which arises between employer and employee is caused by a lack of frankness on the part of the employer. They seem to be obsessed with the idea that they must keep all knowledge of the progress of affairs from the working force, and that best relations can be obtained if the men feel that the enterprise is being run at a loss. No more stupid and ridiculous theory could be imagined, and profit sharing will put an end to it because of the feeling of partnership which is immediately engendered. Each realizes at once that the other has a common interest and that if a difference of opinion exists it must be an honest one; each knows that since both are working toward profit making, both have the same ultimate end and are actuated by the same fundamental desires. For these reasons a greater spirit of justice and

fairness will maintain in those businesses where the employees are partners.

Conflicts and discontent always arise out of a feeling that rights have been usurped or rewards for achievement are inadequate; the logical effect of profit sharing is to eradicate all such ideas and substitute therefor, feelings of loyalty and ownership.

The evil of unemployment in so far as it is caused by conflict between the employer and the employed can and will be mitigated by fair treatment (a proper form of profit sharing is the very quintessence of fairness) but that the distribution of gains among the workers can prevent the occasional disparity between supply and demand and the attendant fluctuation in the amount of work to be done in the world, is impossible of belief.

Some of the arguments against profit sharing are these:

We do not care to make stockholders of our employees because as such they would have the right to exact a statement of profits and might use the information as a basis for demands that wages be increased.

The plan would be all right if every year was a prosperous one and the amount to be divided remained the same or increased; but that not being possible, discontent would certainly arise and trouble result in the lean years.

As participants in the profits, workers would certainly feel at liberty to criticize methods of conducting the enterprise.

The one sweeping answer to all of these objections is that the plan requires, for its greatest benefit, the drawing together into a close working whole of all of the elements of an industry, encouraging them to coöperate to the fullest extent, and no management which does not believe that such a condition will make for greater benefits is tuned in harmony with the plan or can make it succeed.

The knowledge of what profits have been made in the case of companies whose shares are not listed on a stock exchange and which are not therefore obliged to publish them, should not have any different effect than upon those who, because of listing their shares, are obliged to make the annual results public. Rather than detrimental it is quite likely that the results would be beneficial, for the "whole world loves a winner" and a good job with a successful concern is always coveted by desirable workmen. Greater opportunities for advancement lie with the profit-earning organizations, a powerful argument. As for the likelihood that higher wages would be demanded, the working force will be receiving higher wages automatically in their share of the gains.

Since the regular wages will have been paid during the lean years when no profits are made, the worker will be no worse off than if the plan had never been put into effect, and no serious discontent is likely to evidence itself, because the conditions which have brought about the decrease in profits will have been manifest long before the actual results are felt, and the omission of dividends will never come as an unexpected shock. The wage-earner has ever been obliged to adjust himself to varying incomes and is far better able so to do than are his superior officers. From the beginning of enterprise he has been laid off when times were bad, and obliged to work on short time when business was dull. Some would complain, of course, but the great majority would understand; and the most that they might ask would be the repurchase of their shares or a loan upon them as collateral to tide them over the period of inactivity, and this the management must stand ready to grant.

Rather than object to a desire on the part of the working force to offer suggestions, the wise management will foster and encourage such a feeling for in it lies the possibility of greater profit and a certainty of increased interest and enthusiasm among the men. The management of an urban trolley system which shared a certain portion of its earnings with its men, went so far as to appoint auditors from the working force to vouch for the correctness of the calculations, and no evil resulted therefrom.

Granting that some form of profit sharing, properly applied, will bring an affirmative answer to the opening questions of this article, we are then confronted with these thoughts:

Why is it certain or even probable that the profit-sharer will be a greater profit-producer than one whose only reward is his wage?

Under what conditions can it be started and how carried out to make it a success and ensure a greater degree of contentment, honesty and productiveness than existed prior to its adoption?

None but the hermit, the recluse who lives apart from other human beings, makes everything that he wears and uses, seeks or grows his own food, is wholly independent of his fellow men. Just so soon as people gather together in colonies and communities they become reliant the one upon the other and must immediately be mindful of, and influenced by, the rights of all of their fellows. The

hermit is a selfish creature with no thought but of his own comfort and livelihood; the dweller in a community, a broader-visioned being who must needs think of his neighbors in planning his own course of action and habits of life. Everyone will grant that little progress could be made in the world were each member of society to act in total disregard of the rights and privileges of every other member. Factory life is no different from that outside, in that the wage-earner without interest in, or consideration of, the general procedure of the process stands in the way of progress. Unless every employee is mindful of the general welfare, unless he appreciates the effect of his effort upon the fortunes of all, unless he has a greater interest than that of a wage for the performance of a certain operation, he will not be actuated by those broadening influences so much to be desired.

How different is the point of view of the worker who shares in the final profit; immediately his mind refuses to be limited to the narrow confines of his own task and his thoughts reach out toward the finished work, he can see and keenly feel the effect of wasted time and material upon the year's results, part of which belong to him.

An impressive example of this is the experience of a concern selling its product in one of our large cities. The selling organization consisted of salesmen, clerical help, stenographers, each unit working under the direction of the manager and each individual receiving a fixed wage, none particularly interested in the results of the others' work. The salesmen, though friendly, would not take much time to help each other because it was not to their financial interest to do so. The stenographers came and went on the stroke of the hour, the work not finished at the end of the day went over unless the one who desired it and realized its importance to that part of the work for which he was responsible was present to insist that it be finished. The clerks did their tasks in the manner most enjoyable to themselves without much regard to what others thought or how they were affected. And so matters drifted until a strong desire to increase the volume of sales and profits caused the manager to devise a plan which he outlined somewhat as follows:

Our sales in this city are not as great as I think that they should be and I want them increased. You are receiving certain salaries for producing the amount of business we now do and we do not intend to ask that the increased effort need-

ful to enlarge our volume go unrewarded but propose that the wage of each be increased in proportion to the growth of the business. Under this arrangement it is the duty of each to his fellow, to exert his greatest and most efficient effort and to help each other whenever and however possible for the good of the whole since all will share in the final result.

The result was that each employee became vitally interested and concerned in the work of all of the others. Important letters went out promptly even if the stenographers had to stay after hours; clerks discovered that it was a pleasure to humor the whims of desirable customers and to expediate the work of the salesmen by saving their time in all ways possible; salesmen helped each other to close hard contracts fully realizing that in so doing they were helping themselves. The whole work became intensive and maximum results were accomplished through the exertion of maximum intelligent effort.

It is a common error to believe that all workers are devoid of conscience, have no interest beyond their wage and are incapable of being aroused to a sense of pride in their employer and the goods which their efforts produce. That such a state of mind does exist in far too many establishments cannot be truthfully denied, but that it is due to a lack of educational work on the part of the employer is absolutely certain. Never was there a truer axiom than, "like master, like man."

And now we come to the most important phase of profit sharing, the conditions under which it can be successfully attempted and how it must be carried out to ensure advantageous results.

In the first place, the management must be enthused with and thoroughly convinced of its desirability; they must be ready and willing to give away a portion of the profits in order that the business may grow in earning capacity and the employees in working efficiency. They must study the psychological effects to be brought about and understand the cause and result. They must learn these things perfectly in order that they may be able to impart the knowledge to their employees, for it is from careful education that the greatest benefits will be derived. The most important, and an absolutely essential part of the profit-sharing system, is the educational side, the forming of the operative's mind to appreciate and want it, the training of his thought to realize that what helps the business will help him, the combating of the idea that any

embarrassment, misfortune or disaster to the enterprise can bring everlasting benefit to even a small minority of the working force.

Time was, and only a short while ago, when business was not considered to be a science, when training of workmen to do their tasks in accordance with efficient formulæ and of salesmen to apply logic to their interview, was unthought of; fire drills for all employees a thing undreamt. And right here, why, if the majority of workers are devoid of interest in the welfare of the establishments in which they work, are they willing to form into fire brigades, act quickly, efficiently, frequently risking their lives that the property may be saved from destruction? Because some say, "the destruction of the property would mean the loss of a job and the wage it brings." Would not the same result follow the loss of profits?

In nine hundred and ninety-nine cases out of a thousand the most generous and attractive profit-sharing plan imaginable if distributed in bulletin form and allowed to stand unchampioned and unexplained will fail utterly. Why? For the very good reason that the majority of people do not recognize opportunity when it presents itself and cannot reason out for themselves the advantages which they will derive from such a plan.

For profit sharing to be a success, those who are to be made a part of the plan must be educated in its advantages; they must be shown how they are to benefit, every rule and regulation has some bearing upon profits and this fact must be pointed out and made clear. Their attention must be incessantly attracted to the profit-making side of the business with which they are associated, they must be taught to measure every movement, every process of which they are a part by the amount of profit it can be made to yield or the amount of loss it can be made to save. They must be made to realize that time and effort, as well as money and materials, are valuable and that to waste or misuse them is to decrease earnings. They must be shown the close relationship between the wasted moment in the shop or office, or on the road, and the music lesson of the daughter or the bicycle for the son. They must be argued with in terms which they quickly and easily understand and the value of which they can readily appreciate and instantly translate into the needs and desires of their everyday lives.

Some say that operatives oppose such plans because they are

contrary to the dictates of organized labor; perhaps that is so, but very few men who see and understand and can take advantage of an opportunity which is certain to better their position in the world and make the lives of their families more pleasant fail to avail themselves thereof. Profit sharing is such an opportunity for the worker, but it is the task of the employer to drive the idea home.

Just as the average man takes better care of the house which he owns than he does of the one he rents, and treats his own horse with more consideration than he does the one he hires, so will the profit-sharer, the part-owner in the business and its success, treat his employer with greater fairness because of that very feeling of ownership and responsibility. The feeling of ownership engenders a sense of greater interest which quickly minimizes the need for close critical supervision; it acts like the honor system among college students.

Warden Osborne, in his plea for reform in prison management insists that the only way to fit the transgressor for a position of liberty in society is to educate him in the advantages of doing right and to appeal strongly to that sentiment which exists in every human being, a love of his fellow man and a desire to do the square thing by all who treat him fairly. The same is true of profit sharing and he who will take the time and trouble to direct the thoughts of his employees toward the making of profits will find infinite satisfaction in the increased loyalty and prosperity of those about him.

SOME THOUGHTS ON INDUSTRIAL UNREST ¹

BY DANIEL GUGGENHEIM,
New York City.

Chiefly because of the advancing cost of living, but largely at the same time on account of the ever growing inequality in the division of the wealth of the nation, there has been for many years a steady increase of discontent among the laboring people of the United States. This discontent is bound to keep on growing unless radical steps are taken to alleviate the present condition of the laboring classes. A great many things have been done during the past few years to benefit the laboring man but more must be done, and more will be done, because employers of labor and managers of business are commencing to realize to a greater extent than ever before the nature of their obligations toward their toiling employees. Just as the business man of today no longer believes that in order to get on in business he must roll his competitor in the dust, so no longer does he follow the practice of grinding his laborers down, paying them the lowest wages possible and utilizing them for his own interests and nothing beyond that.

Whatever may be the temporary expedients adopted to tide over present difficulties with which the laboring population is confronted, the ultimate solution of the entire labor problem must come through governmental action after careful and nonpartisan scientific study. Private philanthropy has done a great deal toward reducing industrial discontent. The people could not live that are not employed if it were not for the philanthropic work that is now being carried on. But no matter how much is done, enough is never done because the people themselves do not realize what the situation is and there are so many thousands of people who do not like to part with the money they have made, money which often they do not need and which is of no advantage to them. Furthermore, private philanthropy is confronted always by two great obstacles. It has a tendency to pauperize the people whom it is

¹This article is based on the author's testimony before the Industrial Relations Commission.

intended to benefit and it cannot reach many people who are deserving of help because of their aversion toward accepting charity. These obstacles can be surmounted only through state action. Unemployment, sickness, old age and similar problems of labor can be solved only through some system of social insurance managed and applied by state authority. If a man is out of employment it is the duty of the state through some agency to help him obtain work. If a man is physically unfit for labor either on account of injuries, sickness, or age, provision should be made by the state for his care.

Our industrial organization must be democratized. It must be transformed so that the laborer himself may have a voice in the determination of all the conditions by which his interests are affected, the length of his working hours, the amount of his wages, and the surroundings amid which he labors.

As indicated before, the attainment of industrial democracy must come in the main through scientific legislation. Through the action of the federal and state governments, employers and laborers must be brought together by a system of laws in the making of which all members of each class shall have an opportunity to participate. A great deal has been done in the way of legislation in this country but we are still years behind many foreign countries in providing for the welfare of workmen. Although many people are of the opinion that too much legislation is being enacted, I do not agree with that idea, nor do I think that we have begun to legislate to the extent that we shall in the future for the welfare of the workmen. I think the difference between the rich man and the poor man is very much too great, and it is only by taking steps to bridge the gulf that exists between them that we shall be able to get away from the unrest now prevailing among the working classes.

An important feature of the industrial democracy should be the establishment of a system through which the laborers may be permitted to share in the profits of industry. It should be provided, however, that the share due the laboring man may be given him in bulk at the end of a certain period and deposited in some bank or savings institution. The laborer usually does not know how to save and if he gets his money by the week he spends it; his expenses constantly keeping pace with his receipts. A few men learn how to save but it is a difficult matter for a poor man to learn.

Therefore, if he has an extra bonus at the end of a certain period, no matter how small it is, it should be deposited in bulk at some savings bank. As soon as a man has something of his own which he puts aside he feels differently, having acquired the pride of ownership and the knowledge of how to save. The cultivation of thrift will be of benefit not only to the individuals who save but to the people at large.

Industrial reforms can be brought about only by collective action and the first step toward securing the legislation necessary to the establishment of industrial democracy must be the organization of the workers who are to be benefited. The fact must not be overlooked that we have at the present time good organizations and bad organizations among laborers, just as we have "good trusts" and "bad trusts." The quality of leadership decides the quality of the organization. But good labor organizations, of which we have a great many in this country, can get together, analyze their difficulties and dispose of them. Such organizations deserve the fullest measure of coöperation from all employers, and it is through their united action that proper laws may be passed for the improvement of the economic condition of the people. We have already made a start in this country toward the establishment of industrial democracy through the enactment of laws regulating the hours of labor, laws fixing compensation for injuries, and laws regulating the conditions of employment. Progress in the future will be more rapid than in the past. With a proper organization of the forces of labor and capital and the cultivation of a mutual regard for the rights and obligations of both it will be possible to bring about any desirable change in our industrial system.

THE NEW GOVERNMENT REGULATION OF BUSINESS

BY JAMES T. YOUNG,

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Shall the new industrial expansion be helped or blocked by our public policy of regulation?

Government is now a silent partner in every business. The great weight and influence of this member of the firm can be thrown either for or against the concern. There are certain marked and definite changes in our policy which show that, all gloomy prophecies to the contrary, our regulative system is gradually unfolding along constructive lines and that in the era which we are now entering, the reasonable interests and demands of both *investor* and *consumer* may be realized. The most noteworthy of these changes are:

1. The turning of government attention and effort from prohibitive litigation towards regulation by federal commissions and administrative bodies.

2. The distinction in the courts between combines which are large and those which are guilty of crooked practices in competition—the dissolution of these latter, not because they are combines, but because their methods are illicit.

3. Our states have now almost universally grasped the public service commission idea and are abandoning attempts to regulate by legislative enactment covering the details of business.

4. Notable progress is being made in the effort to hasten final decisions by all authorities, both commissions and courts, of disputed points in regulative law. We are trying to give to both sides, the producer and the customer, the advantages of early decisions without delay.

5. We are just awakening to the fairly important fact that federal rather than state regulation of business is the only safe and effective plan for the future. All the most essential points of national regulation must be placed in national authorities. Let us consider the advantages which these changes bring to the American productive machinery.

1. Commission regulation is supplanting that of the courts.

Why is this a step forward? No one can have contemplated the long array of judicial decisions under our anti-trust laws without feeling that we were in some dim sense struggling against the human tendency to coöperate by team work, and that sooner or later our courts must find an interpretation of the law, or our legislators must enact a new series of statutes which would recognize this fundamental human tendency. One of the greatest misfortunes that has befallen the anti-trust campaign has been that the monopolist, the price manipulator, the trade destroyer and the commercial pirate have been able to escape when prosecuted, on the plea that the law was forbidding an economic growth. It would be highly interesting and serviceable but probably illegal under the libel laws to point out numerous recent instances in which business piracies of this kind have successfully escaped punishment because either judge or jury opened their minds to the plea that the anti-trust laws were uneconomic. Because of this feeling the small competitor has been destroyed with impunity and the consumer has been mulcted of hundreds of millions of dollars without redress in the courts. Even the mighty machinery of the federal government itself when set in motion by an injunction has failed to prevent a new lining up of the enjoined combines. The criminal prosecution and the injunction have been a disappointment to us. They are effective only against the little man. Their influence and value are in inverse proportion to the size of the combine and its power for destruction. Yet they have had a marked effect in unsettling business and raising doubts and uncertainties in the public mind. While not protecting the consumer, they have greatly injured the investor. We need some *permissive* authority, some machinery which will hasten, clarify and make definite the settlement of fixed principles of regulation—some plan which will offer a more continuous and constant system of control. The Sherman act has in part succeeded and despite all criticisms it is still a strong bulwark of protection to the consumer and small producer in many fields, but either the law itself or its administration has failed in one important respect—it has thrown the entire burden of overseeing and superintending its enforcement upon the courts. The courts are not administrative supervisory bodies, nor can they ever become such. They are not constantly in session. Their calendars are more or less fixed. Their procedure is likewise more rigid than that of an administrative

body. They have not the facilities for investigation, research and specialized study of the field of regulative law. In a word, they are not administrative and cannot be made so without overturning their essential judicial functions. When a court hears a criminal prosecution for violation of the anti-trust acts, and sentences or acquits the accused, its work is done. When it grants or refuses an injunction to prevent further violation of such laws, it has completed its function. It may later investigate to see if the injunction has been violated, it may shorten the sentence of the convicted, but it does not and cannot regulate from month to month. Nor can it issue general rules to apply and enforce a law as is constantly done by an administrative body. Yet it is only this constant and continuous type of regulation which allows or permits, revises, corrects, expands, interprets and enforces, that we can safely use in our present conditions of business. Can we imagine the courts of the United States regulating our railway systems or determining in the many thousands of cases which arise, what is a "reasonable rate" under the railway act? Can we imagine our courts establishing, even after decades of decisions and precedents, the various principles which are now being set forth in a few clear, explicit rules to enforce the pure food and drug act, by the administrative board which has charge of this question? For nearly twenty-five years the Sherman act has been on the statute book and the courts have been industriously seeking to establish the meaning of the words "restraint of trade." Yet over twelve hundred large combinations with nearly two billion capital still exist in doubtful legality. Can we picture our state courts likewise seeking through another generation to determine "reasonable" rates for gas, telephone, electric light, water and railway companies? The commission idea has gained such wide acceptance in federal regulation because it presents four pronounced advantages:

(a) Constant accessibility—all commissions are required by law to be permanently open for business.

(b) Expert service—all our commissions employ a staff of skilled investigators to bring in the facts. This independent impartial testimony from an unbiased point of view is invaluable.

(c) The commission offers a cheap, quick and informal procedure. This our courts cannot or will not do since they are held in leash by ancient custom and tradition.

(d) The commissions, as we have just seen, not only decide individual cases but issue sets of *regulations and rules* to execute the law. In short, they decide in advance most of the disputes which might come to them and apply the general principles of the law to vast numbers of cases to prevent disputes. This is probably their highest service and too little attention has been paid to it by the public. Courts decide, while commissions not only decide but prevent. If our courts could fulfill all these invaluable functions, we should have no need for commissions.

The highly promising trend towards administrative commissions in the national government is now well marked. The railway act is enforced by the commerce commission. The pure food and drugs act of 1906 has revolutionized this field of manufacture. Remarkably few heavy fines and penalties have been levied under it. A vast number of fine points of distinction between legal and illegal labels, methods of preparation, ingredients, etc., have arisen. Yet the law today is well cleared up on all essential points in less than a decade after its passage. It is administered chiefly by scientists in a chemical laboratory, by inspectors gathering samples and by *rules and regulations* issued by the secretary of agriculture, secretary of the treasury, and the secretary of commerce, acting as a joint board. Unfair competition in all forms of interstate business is forbidden by the act of September 26, 1914. Its enforcement is entrusted chiefly to the new Federal Trade Commission which has power to decide individual cases of unfair competition and, what is far more important, to make rules and regulations carrying out the principles of the act. The producer wants to know where he stands. Many have complained that under the old laws they had no clear idea of the legality of their acts nor did the competitor know his rights. This doubt and uncertainty, the administrative rulings of the commission speedily remove. Most interesting is the fact that the new laws do not regulate details. The commerce act says "discrimination," "reasonable rates"; the food and drugs act says "adulteration" and "misbranding"; the Trade Commission Law says "unfair competition." Every one of these phrases is fully as vague and indefinite as the term "restraint of trade" in the Sherman act. Yet what a remarkable difference in their enforcement. The new laws and the commerce act provide that the administrative commission shall determine by its rules and regulations the exact

meaning of "discrimination," "reasonableness," "adulteration," "misbranding," "unfair competition." It is this that gives flexibility, clearness and dispatch to the new system of business regulation.

2. The judicial mind by an effort, which, though arduous is none the less deserving of recognition, has begun to distinguish between the good and the bad trust. It has been greatly hampered in this effort by the absence of that administrative power which we have seen gives so much life and point to commission rules. Yet the courts have done their best to separate the sheep from the goats by the justly celebrated but widely misunderstood "rule of reason." When this rule was first proposed by Justice White in the dissenting minority opinion in the trans-Missouri freight association case, it was answered by the majority that the words "Every combination in restraint of trade," as used in the Sherman act, meant "Every," and that it was not for a court to insert in the law a proviso permitting reasonable restraint when the law-maker himself had refused to do so. Fourteen years later Justice White, now become chief of the supreme bench, again announced his doctrine and this time carried with him a majority of the court in the Standard Oil and Tobacco cases. The rule, shorn of its complexities, is simply that a combination when accused of restraint of trade will be judged by its purpose and effect; not by the accident of form nor the circumstance of size. Translated into the language of the layman, the rule means that since all coöperation or team work in industry involves an agreement by the members of the team not to compete with each other, but to coöperate, there must be some difference between reasonable and unreasonable restraint of trade. It is the unreasonable which the law forbids while the reasonable is to be permitted under the new rule. The best application of the rule of reason is seen in the *United States v. St. Louis Terminal Association*, 224 U. S. 383, decided in 1912. Here an interesting engineering problem had come in contact with the federal trust laws. The great breadth of the Mississippi River, the high banks on the St. Louis side, and the expense of bridging and tunnelling these two natural obstacles to entrance, had led to a combination of the lines entering St. Louis in a terminal association, which owned and operated all the approaches to the city. This association under the early tutelage of Jay Gould had placed in its by-laws a number of provisions de-

signed to keep out competitive lines in the future. Among these were clauses providing that the lines forming the terminal association would not construct other entrances to St. Louis than those owned by the association and that they would allow no new line to enter the association without unanimous consent. These provisions combined with the prohibitive expense of constructing any new independent entrances gave to the association an air-tight monopoly. The federal department of justice asked for a dissolution of the combine as a serious restraint of trade and in the resulting suit the court gave the most striking example of the rule of reason thus far seen in our regulative laws. It divided the combination into two separate features. First, the union of all the terminal facilities of the city under the control of the association and second, the restrictive and oppressive clauses by which outsiders were prevented from joining the association. The first, the union of facilities, was an economic and reasonable arrangement. It was not contrary to the spirit of the law even though it necessarily involved a cooperation between railways that were authorized competitors. The physical conformation of the territory round about the city which made competitive entrances impossible was heavily emphasized by the court and from it the court concluded that a union of competitors was essential and legal. But the second feature, involved in the restrictive clauses in the by-laws, clearly showed a purpose of oppression and restraint upon outside lines and such restraint had actually resulted. It was held to be illegal. The association was ordered, not to dissolve, but to repeal these violations of the law and to supplant them with reasonable rules under which other railways could both enter the association or enjoy upon reasonable terms its facilities for entrance.

If this decision is followed and the rule of reason extended, we shall cease to prosecute combines *because they are combines*, or because of their size, while we shall still continue to visit the penalties of the law upon those destructive and oppressive practices which are intended to wipe out the competitor or exploit the consumer.

3. The states have caught the spirit of administrative or commission regulation from the federal government. The few experimental commissions which were first established on the model of the national commerce body, have now been copied in thirty-three states and the District of Columbia. This system is not perfect.

Contrary to general expectations it has not afforded the consumer the full protection that was hoped, but one great service it has undoubtedly rendered. It has removed the regulation of public service companies from the field of legislative and partisan politics. We hear less of two cent per mile rate laws and more of methods of accounting, improvements in service, etc. Many of the state commissions, it is true, have taken it as their special mission in life to prevent municipal ownership of gas, electric light, and other public utilities. In order to do this, whenever called upon to appraise local utility plants which were about to be bought by the cities, the commissions have placed remarkable and inflated values upon such plants and thereby made it impossible for the cities to purchase. Whether the end toward which they aimed was good or not the method has been regrettable and has not stimulated public confidence in commission appraisals, but this must not blind us to the very real services which the commissions have performed.

4. We are shortening the delays in hearings and in the decision of law suits in public regulation. Until recently it has been the custom to appeal from decisions of the federal or state commissions to the courts, to hold up final decisions of the courts themselves, until such a dispute frequently, if not usually, required from five to seven years to decide. The friends of the commission plan now realize that such delays must be avoided in the future, since the very principle of commission regulation is at stake. No better means of destroying the new system could be found than to allow it to exist nominally while in practice suspending the commission rulings by long drawn out appeals. The friends of the new plan have therefore bent their energies toward shortening the appeal procedure and dropping out as many of the steps in this procedure as possible. The Interstate Commerce Commission rulings may be appealed to the federal courts but such appeals do not go to a district court; they are now made direct to the circuit courts of appeals, as are also the appeals from decisions of the new Federal Trade Commission. Many of the newer state laws provide that appeals from the public service commission shall go direct to the supreme court of the state. While this is not constitutional in all the states it is so in many and allows of a marked saving of time for both parties. After all is said, we must judge the new methods of regulation not by their aims and hopes but by their output, and it is

vital to their success that both producer and consumer shall have an early settlement of all essential questions in dispute.

5. The question, shall we have federal or state regulation?—is now rapidly pushing into the foreground as one of the prime issues in the successful working out of our regulative policy. The federal system has won a notable victory in the Shreveport decision and in order to realize the progress which this decision marks let us contrast it with the opinion in the Minnesota rate case. The real principle involved in these two opinions is extremely simple despite the complicated circumstances in which it was wrapped up. In the Minnesota rate case, *Simpson v. Sheppard*, 230 U. S. 352, the state authorities in Minnesota had reduced materially the freight rates to be charged within the state. The railways found that this affected the charges which they could make on interstate traffic passing through the state as well as on local traffic, because shippers whose freight was passing through Minnesota to other states could easily claim the advantage of the low rate within the state. In brief, the local Minnesota rate change immediately reduced the through rates on national traffic—"interstate trade." The railways accordingly claimed that the law was unconstitutional since it was in substance and effect a state regulation of interstate trade, and only the national government could legally regulate such national traffic. But the supreme court overruled this objection and upheld the state's regulation on the ground that while it did undoubtedly have the effect of influencing interstate rates its real purpose was to control local rates and this the state had a clear and undisputed right to do under the constitution. This decision seemed to destroy at one blow the freedom of national railway traffic from local interference and subjected such trade to all the petty, various and conflicting rules of the states through which it passed. It was indeed an ominous ruling which seriously undermined the prosperity of all the interstate carriers. But in the following year federal control was reasserted and the necessity for it clearly shown in the celebrated Shreveport case, *Houston etc. Railway v. United States*, 233 U. S. 342. Here the state authorities of Texas and the railways under their jurisdiction had established a system of local rates within the state which kept out trade from the commonwealth of Louisiana. Shreveport, La., was on the boundary line. It wished to become a distributing center and its merchants to this end sought

freight rates from Shreveport into the state of Texas which would enable them to send goods into large areas of that state and compete actively with the Texas distributing cities. The local railway rates, however, were so arranged from the boundary of Texas into the disputed markets as to discourage such outside competition while the local rates from the Texas cities to the disputed markets were kept at a lower point to favor the merchants of the Texas cities. Could the federal authorities intervene in such a situation? The Shreveport merchants appealed to the Interstate Commerce Commission for a through (interstate) rate which would enable them to compete in the territory in question. The Commission ruled in their favor, ordering the railways to remove the discrimination against interstate trade by readjusting the relation between interstate and local rates, that is, the railways should either lower the interstate rate to the same proportionate level as the local rate, or raise the local rate to the same proportionate level as that on interstate traffic. At once the railways and the state authorities appealed from this ruling, claiming it to be an infraction of the state's authority to fix its own local rates as it pleased. Basing their appeal on the Minnesota rate decision they maintained that since the state could determine the rates to be charged in local business within its boundaries, the federal authorities could not interfere with this action. The court upheld the national commission and declared that that body was authorized to regulate national railway rates. Its province was to protect and further interstate trade and in doing this it could remove any discrimination or barrier erected against such trade by no matter what local authority. The court explained further its opinion in the Minnesota case by saying that all state action which influences directly or indirectly interstate trade was only upon the suffrance of federal authorities. While a state law might be allowed to stand *in the absence of Federal action*, in the moment the Federal Government acted the state power ceased. This clear unequivocal definition of the national control has reestablished, not the freedom, but the possibility of freedom from state interference, *if Congress will act*. Contrary to the belief in certain business circles we need not less regulation but more, and it must be by the federal government.

While all the above-mentioned changes in our regulative system are highly encouraging because they show the tendency to

bring policy into harmony with actual conditions, there are still needed two other important, even vital, improvements in this policy, both of which fortunately lie along the lines of our present growth and conform in principle to the ideas above described. These are a change in the powers of the trade commission and the further enlargement of national at the expense of state regulative control.

Our regulative laws need greater elasticity and flexibility. These qualities can only be given in the administration of the law. It is hopeless to attempt to secure flexibility by court action for reasons which we have already examined. We must rely to an ever greater extent upon administrative commissions and boards, particularly in the federal government, to apply the general principles of our regulative acts to the manifold and various conditions of national trade. The best instance of this can be seen in the much discussed and really important question of price protection in retail trade. Shall the manufacturer have the right to arrange with retailers that they shall sell only at a certain figure? On this point volumes have been written. The supreme court has covered it in two leading decisions: *Bauer v. O'Donnell*, 229 U. S. 1, and *Miles Medical Co., v. Park Drug. Co.*, 220 U. S. 373. In these and other cases it has declared that price-fixing by agreement in interstate trade is a violation of the Sherman act because it is an agreement not to compete in prices but to fix a single price. An agreement not to compete is a restraint of trade. Accordingly the whole fabric and structure of price protection by agreement is illegal. There is no flexibility in this principle. The good and bad price-fixing agreements alike, the extortionate and the justifiable are both condemned. We need some administrative investigation and weighing of each agreement so that it can be condemned or approved in each case according to its purpose and effects. There is only one way of securing this. The powers of the federal trade commission should be enlarged to approve any agreement which would otherwise fall under the ban of the trust laws but which on careful inspection proves to be beneficial or harmless. Its present authority is too exclusively negative and prohibitive in character. It may forbid and investigate and deny but its *permissive* power is too limited. For example, Section 11 of the commission act provides that

nothing contained in this act shall be construed to prevent or interfere with the enforcement of the provisions of the anti-trust acts or the acts to regulate commerce, nor shall anything contained in the act be construed to alter, modify, or repeal the said anti-trust acts or the acts to regulate commerce or any part or parts thereof.

This makes it clear that the commission cannot legalize any agreement. Section 7, of the Clayton law, dealing with holding corporations and the union of competitive companies, declares that "nothing in this section shall be held or construed to authorize or make lawful anything heretofore prohibited or made illegal by the anti-trust laws, nor to exempt any person from the penal provisions thereof or the civil remedies therein provided." And Section 11, of the same act, after outlining the powers of the commission to prevent unfair competition, again limits the commission's authority by declaring that "no order of the commission or board or the judgment of the court to enforce the same shall in any wise relieve or absolve any person from any liability under the anti-trust acts." We have therefore in these two statutes several clearly worded clauses which emphatically reassert all the provisions of the Sherman act and prevent the new trade commission from using its power to apply the law in an effective and flexible way. Yet we have seen that the great advantage to be gained by such a commission is precisely this sound modern view of the law which would distinguish between various types of combinations in restraint of trade, allowing those which are beneficial to stand and suppressing those which are harmful. If the commission had this power it would solve the problem far better than a legislative control with its inflexible prohibitions and penalties.

There is no reason why our government should fix prices except in public service industries but there is every reason why it should not condemn indiscriminately all agreements to fix prices. It is feared by many that such an enlargement of the commission's power might fasten upon the country, by legal action, a scale of artificially high prices and might continue in existence with a guaranteed profit, the inefficient producer or merchant who refuses to adopt modern ideas and processes. But of this we need have no fear if our experience with the Interstate Commerce Commission is a safe guide. Rather would the tendency of public opinion compel an administrative body to keep prices at a reasonable level and this

pressure would in itself stimulate the producer to make use of every new and improved method in manufacture and merchandise. Such a change would give a much broader scale of liberty to interstate companies and would above all provide a much clearer definition of what they can and what they cannot do under the law. It offers the further advantage of being directly in line with our past administrative experience and precedents.

Finally the enlargement of the federal, at the expense of the state jurisdiction over national trade, is of equal, if not greater importance. Our supreme court today allows the states both to tax and to regulate interstate companies to an extent that was never intended by the constitution and in a way which seriously burdens and obstructs national business. Originally the federal courts resolutely defended national trade from state levies of this kind. In such statesman-like decisions as in *Brown v. Maryland*, Chief Justice Marshall and later his successors, in *McCall v. California*, *Galveston Railway v. Texas* and similar cases, held that the state must not interfere with national commerce because the regulative power over national trade had been given to Congress alone. In fact as late as 1909, in *Western Union v. Kansas*, 216 U. S. 1, the court declared that a state tax on the total capital stock of a *national* carrier was a burden on the *national* business of the carrier and therefore a violation of that clause which gave to Congress the regulation of national trade. These rulings all carried out the manifest intent of the clause in question but many of them had been rendered by a divided court, and nearly all the most important decisions were made by a vote of five to four.

The fluctuating majorities of the court have usually turned in all essential points against protection of interstate business and we have a series of rulings which threaten to modify if not repeal the protection of the commerce clause. A state may tax all the property located within the state belonging to an interstate carrier—*Thompson v. Union Pacific*, 9 Wallace 579. It may tax even the gross receipts within the state, from all sources, of an interstate carrier, provided it excuses the carrier from other taxes—*U. S. Express Co., v. Minnesota*, 223 U. S. 335. A state may even tax its share of the capital stock of an interstate carrier—*Pullman Co. v. Pennsylvania*, 141 U. S. 18. The state's share in this case is measured by its proportion of the total mileage covered by the

company's cars. And since the capital stock includes the value of the franchise or right to engage in interstate trading, the state may be said to have the right to tax that franchise. If the property, the gross receipts, the capital stock including the franchise of a carrier may be taxed, what is left?

And, when we come to those interstate companies which are not common carriers but are engaged in manufacturing and trading we find their lot indeed to be an unenviable one. The common carrier may at least construct its lines and transact its interstate business regardless of the state's wishes but other commercial companies, industrial or trading concerns, cannot transact any general business within the state without its consent. They may ship their goods in from outside, they may send their traveling salesmen in to take orders and in all such operations may claim the exemptions of interstate commerce but the moment they open an office for general business within a commonwealth, they are subject to its rules, regulations and taxes and may even be totally excluded should it see fit. So for example, The Horn Silver Mining Company, a Utah corporation with ten million dollars of capital, had been taxed in Utah where it was incorporated. Much of its property lay in Illinois and there it was taxed. But in an evil hour the company decided to enter the state of New York for the transaction of local business. For the privilege of opening a local office it was taxed upon its *entire capital stock*, the amount of the levy being thirty thousand dollars. It protested, appealing finally to the federal supreme court and claiming that as a company engaged in interstate business it could enter any state and if taxes were levied by a state for the privilege of transacting local business within its boundaries, such taxation must fall upon the local business for which they were charged and must not be levied upon the total national business of the company. But to this objection the court made answer that every state possessed absolute, complete control over the local business transacted within its bounds, just as Congress controlled interstate trade. No outside corporation could claim the right to engage in local trade against the will of the state. Accordingly if a state wished to keep out such a company absolutely it could do so, but the right to exclude carried with it also the right to admit under conditions, and one of these conditions might be the payment of a license or permit fee for the privilege of transacting local busi-

ness. If the Horn Mining Company wished to engage solely in interstate trading it might do so without paying such a license but when it opened a general office for all kinds of trade within New York State, it must first secure the permission of the state authorities. The fact that these authorities measure their license fee by the total capital stock of the company should not be regarded as proof that they were taxing interstate commerce, they were only measuring their tax by the amount of the capital stock and the levy really was a burden upon local business rather than national trade. This decision is not a temporary, freakish aberration from the general policy of the court. It is one of a long line of precedents by which the supreme court has so completely subjected national companies to state taxation that they are now obliged to evade such taxes by forming local companies with small capital to transact their local business. The stock of these local companies is owned by the parent concern. In order to secure the protection which the constitution guaranteed them they are obliged to resort to shifty expedients.

This brief survey shows how urgently we need a strong assertion of national sovereignty over national trade. State regulations and state taxes on this trade should be immediately superseded by federal action. We must remember that in all of its decisions upholding state rules on interstate commerce the supreme court has attached the proviso that such rules would be invalid *if Congress should act*. What we need, therefore, is action by the national government which will establish national rules to displace such interference, the further assertion by Congress of its regulative power over national trade to exempt both the carriers and other interstate companies from local taxation. The imposition by Congress of a national tax on such companies would be of invaluable assistance to the channels of national business. We should then have our interstate trade established on the sound basis of complete freedom from local interference and subject only to that flexible, adaptable and elastic regulation of the national administrative commissions which has been described. By this means only can we provide a constructive policy of regulation.

THE INFLUENCE OF THE FEDERAL RESERVE ACT UPON COMMERCIAL BORROWING

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Many bankers and a larger proportion of the business community have not as yet realized the tremendous influence which the Federal Reserve Act will have upon methods of commercial borrowing and the relations of the borrower to the banker. More than 7,600 national banks have joined the system, while with a few exceptions 15,000 state banks have thus far elected to pursue a policy of "watchful waiting." Although the member banks are numerically in the minority, yet their commanding resources and the influence which their operations exercise in the field of business are sufficiently great to cause the changes demanded by the Federal Reserve Act to eventually reach every class in the community. The development of the long-needed improvement in the methods of business borrowing will be gradual, but we are at the threshold of a long, and, let it be hoped, steady, wise and cautious development which will not be completed for many years.

The Federal Reserve Act contemplates that only certain well-defined classes of commercial paper shall be eligible for rediscount or purchase by the Federal reserve banks. The provisions of the act bearing upon this point are found in sections 13 and 14, and are as follows:

Upon the indorsement of any of its member banks, with a waiver of demand, notice and protest by such bank, any Federal reserve bank may discount notes, drafts and bills of exchange arising out of commercial actual transactions; that is, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used, for such purposes, the Federal Reserve Board to have the right to determine or define the character of the paper thus eligible for discount, within the meaning of this Act. Nothing in this Act contained shall be construed to prohibit such notes, drafts, and bills of exchange, secured by staple agricultural products, or other goods, wares, or merchandise from being eligible for such discount; but such definition shall not include notes, drafts, or bills covering merely investments or issued or drawn for the purpose of carrying or trading in stocks,

bonds, or other investment securities, except bonds and notes of the government of the United States. Notes, drafts, and bills admitted to discount under the terms of this paragraph must have a maturity at the time of discount of not more than ninety days: *Provided*, That notes, drafts, and bills drawn or issued for agricultural purposes or based on live stock and having a maturity not exceeding six months may be discounted in an amount to be limited to a percentage of the capital of the Federal reserve bank, to be ascertained and fixed by the Federal Reserve Board. * * * * *

The aggregate of such notes and bills bearing the signature or indorsement of any one person, company, firm, or corporation rediscounted for any one bank shall at no time exceed ten per centum of the unimpaired capital and surplus of said bank; but this restriction shall not apply to the discount of bills of exchange drawn in good faith against actually existing values. * * * * *

SECT. 14. Any Federal reserve bank may, under rules and regulations prescribed by the Federal Reserve Board, purchase and sell in the open market, at home or abroad, either from or to domestic or foreign banks, firms, corporations, or individuals, cable transfers and bankers' acceptance and bills of exchange of the kinds and maturities by this Act made eligible for rediscount, with or without the indorsement of a member bank. * * * * *

Every Federal reserve bank shall have power: * * * * *

(c) To purchase from member banks and to sell, with or without its indorsement, bills of exchange arising out of commercial transactions, as hereinbefore defined;

It is very important at the outset to note that the act specifically excludes notes, drafts or bills of exchange "covering merely investments or issued for the purpose of trading in stocks, bonds or other investment securities," that commercial paper, to be eligible, must "arise out of actual commercial transactions" which are explained to be paper, "the proceeds of which have been used or are to be used for such purposes." The inclusion of paper, the proceeds of which *are to be used*, opens up one of the most difficult administrative problems in connection with the matter of commercial borrowing, for the Federal Reserve Board, to whom, it will be remembered, is given the task of defining in detail the classes of paper which are eligible for rediscount, has had great difficulty in formulating a workable definition which will accord with the provisions and spirit of the act. A recital of the problems which have confronted the Board, and the reasons for the various regulations as promulgated, is the subject matter of this article.

The purpose of the Federal Reserve Act is to exclude all classes of paper, which are not self-liquidating. Mr. Samuel Untermyer well phrased the test which must be applied when he said:

Commercial paper, as I understand it, is that which represents an actual transaction in the consummated purchase and sale of merchandise intended for resale and consumption. It must answer the test of being an obligation that automatically discharges itself in the ordinary course of business.

Mr. Festus J. Wade, one of the committee of the American Bankers Association, in his statement before the Senate committee declared that:

We recommend as a committee that notes be based on what is known as commercial paper: that is to say, paper that is issued for the purchase of the products of the earth, of the farm, of the factory, of the mine, of the commercial establishment. That represents the commerce that is gradually consumed within a year or within a six-month period. . . . Every bale of cotton that is ginned is consumed within a short period of time. Every bushel of wheat is consumed within a short period of time, every bolt of calico on an active merchant's shelf gradually goes into consumption, and they issue, in order to move that commerce, what is known as commercial paper, which matures within a short time, and it consumes itself, and therefore brings back from the Nation all over the money to meet the obligation of these short-time notes. . . . The well-regulated commercial house never renews its paper.

On February 7, 1914, the Reserve Bank Organization Committee addressed a circular letter to a number of the leading clearing house associations of the country, asking each association to suggest a definition of commercial paper, which would meet the terms and spirit of the Federal Reserve Act. While it is impossible for us to go at length into the replies of the several clearing house associations, yet a brief review of the tenor of the responses will serve to indicate the remarkable unanimity of opinion among bankers as to the necessity for an improvement in certain classes of commercial paper. The responses of the clearing houses indicated that almost without exception the problem was recognized to be that of preventing abuses in the issue of single-name paper. Single-name paper includes all notes made to the order of the maker and endorsed by him; that is to say, paper where there is only one firm or name upon it. In some cases the paper of corporations bears the personal endorsement of leading stockholders or officials, but even when this is the case it is generally known as single-name paper.

The Boston clearing house in its reply pointed out the manifest disadvantages in declaring single-name ineligible for rediscount and declared that: "We believe, however, that it is desirable to encourage the making of strict 'Commercial Paper,' that is notes or accept-

ances for goods given by the buyer to the seller, and that this would benefit not merely the banks but the general credit situation in the country as well. We recommend that the Federal reserve banks provide that strict 'commercial paper,' as defined above, be discounted at a lower rate than single-name paper by the Federal reserve bank."

The Philadelphia clearing house declared that: "Great care, however, should be exercised by the Federal Reserve Board in not permitting too free an issue of currency against single-name paper" and recommended that: "In order to place a check upon too free an issue of single-name commercial paper and its rediscount the Federal Reserve Board might require that all single-name paper, to be eligible for rediscount, must be registered at the Federal reserve bank or branch in the district where the drawer's business is located." The reply set forth in detail the conditions which should govern the registration of such paper.

The Seattle clearing house recommended that "the established custom of the vendor carrying the account of the purchaser in an open form should be discouraged, and as rapidly as possible supplanted by substituting for the account short time notes (or acceptances)." The Denver clearing house took the same position, recommending that "obligations of this nature should eventually be converted into bills of exchange so that their character may be discernible at a glance."

It is worthy of note that the New York Clearing House took the most advanced position of all in its reply. While recognizing that the practice of financing large business enterprises through the sale of single-name paper could not be discontinued abruptly, the reply declared that: "We deem it a matter of the utmost importance that there should be a general restoration of the former conditions in this respect. The use of commercial acceptances abroad is a prime factor in the open discount market and a similar system should prevail in this country. The purpose of issue of this class of paper is apparent on its face; and as it retires itself automatically, it is an efficient aid in furnishing an elastic circulation."

The National Association of Credit Men, which also had been requested to consider this matter, replied that "there should be encouraged a gradual substitution in part of the two-name paper or commercial bills evidencing the sale and delivery of merchandise

for the rigid and open account credit system, so that it may not be deemed unusual for a note or acceptance to pass from buyer to seller as the evidence of merchandise bought and delivered," and recommended that in order to "assist the cultivation of the desirable commercial bill as a feature of our credit system, it must be accorded some distinct recognition other than the educative process which should gradually attract and win business men to its support. This recognition could be (a) limiting the one-name paper to 90 per cent of the total accepted for rediscount during the first year, to 85 per cent the second, and 75 per cent the third year; (b) allowing to the two-name paper or commercial bill a very slightly lower rate of discount."

As contrasted with this position, the Merchants Association of New York City made a vigorous protest against the elimination of single-name paper, contending that it would involve a radical change in the methods of handling business; would largely increase the volume of clerical work, through the necessity of handling hundreds of small notes instead of a few large ones, and make more difficult the marketing of such small units through note brokers.

The Federal Reserve Board has not gone so far as many of the Clearing House Associations have recommended. It has not excluded single-name paper from the privilege of rediscount. It has not given to the accepted commercial draft a lower rate of discount than that enjoyed by the single-name paper, nor has it specified the proportion of total rediscounts which can be made up of each class of paper, nor has it adopted the recommendation concerning the registration of single-name paper.

The first regulations concerning commercial paper were promulgated by the board on November 10, 1914. These regulations provided, in substance, that all eligible paper, when offered for rediscount after January 15, 1915,

shall show on its face, or by indorsement, a statement substantially to the following effect:

Eligible for rediscount with Federal Reserve Banks under regulations of the Federal Reserve Board Circular No. 13—

Credit File No.
 District No.
 Name of member bank

The credit file number shall refer to evidence in possession of the member bank that the proceeds of such notes, drafts, or bills of exchange, under the terms of the loans made or to be made, were, or are to be, used for agricultural, industrial, or commercial purposes, as required by Section 13 of the Federal Reserve act and as imposed by Regulation No. 2 of the Federal Reserve Board, and such credit files shall be open to inspection by any examiner appointed by the Controller of the Currency or selected by the Federal Reserve Bank discounting same, and copies of such files, or any part thereof, shall be furnished to the officers of the Federal Reserve Bank upon request.

The credit files referred to should contain not only evidence of the purpose or purposes for which such loans are made, but also full and complete information as to the financial responsibility of the borrower, including a short general description of the character of the business, balance sheet, and profit and loss account of the borrower. Assets should be divided into permanent or fixed investments, slow assets, and quick assets. On the liability side should be shown capital, long-time loans, and short-term loans. Short-term loans should be in proper proportion to quick assets, and the statement should contain satisfactory evidence that short term paper is not being sold against permanent or slow investments. The statement should, furthermore, show the maximum aggregate amount up to which the concern supplying this paper expects to borrow on short credit or sale of its paper, and the individual, firm, or corporation giving the statement should obligate himself or itself to obtain the member bank's consent before exceeding the agreed limit. The affixing of the stamp stating such paper to be eligible for rediscount will be considered a solemn and binding declaration by the member bank that the statement has been examined from this point of view and that the paper bought complies with all the requirements of the law and of the regulations hereby imposed.

An analysis of this regulation discloses the radical character of the requirements which it imposed. In the first place, the paper, in order to be eligible for rediscount, must be that of borrowers concerning whom the constituent bank offering the paper for discount has certain specified credit information in its credit file. In order to insure that this information is at hand, the member bank was required to affix the number of the credit file containing the information concerning this borrower. Little was left to the discretion of the bank concerning the character of this information. A balance sheet and a profit and loss account, arranged in a prescribed order and calling for prescribed information, were required. By the first, the assets and liabilities of the firm—fixed, slow and quick—must be shown; by the second, the firm's profits and the method of distributing them would be made known, and in addition, the signed and sworn statement should show the maximum

aggregate amount up to which the concern expected to borrow in the immediate future.

Business organizations protested against the severity of these requirements. It was suggested to the Board that the requirements were too radical; that the rank and file of the member banks did not have credit information concerning all of their borrowers, and that until such information could be procured, the member banks would be in a position of having paper which could not meet the technical requirements, and hence could not be rediscounted, irrespective of its goodness. This would leave the member banks in an unprotected position and might subject the system to too grave a danger in case of any unforeseen emergency. It was represented to the Board by many banks that it would be very impolitic to impose a general requirement of such a nature at the beginning. Business men would resent these inquiries and they might cost the national banks many customers who would go to state institutions where such requirements would not be observed. Particular umbrage would be taken against the disclosure of profits, which business men would feel might be used to their disadvantage, should the statements come under the eyes of directors or others directly or indirectly competing with them.

The requirement that a business firm should covenant as to the maximum amount of its borrowing on commercial paper, was also much criticized. It was pointed out that it would be impossible under present-day conditions for a large borrower, selling single-name paper, to get into communication with every bank which might hold its paper in case some unforeseen contingency might make it expedient to increase current borrowings. Single-name paper is widely distributed through note brokers, who jealously guard the names of their customers as a valuable business secret. Moreover, even if the note brokers coöperated, it might be difficult to locate all of the paper of a given firm, for frequently such paper is sold from one bank to another in inter-bank dealings.

In consequence of the various representations and objections which were made, the Federal Reserve Board announced on December 19, that it would postpone the going into effect of Regulation No. 4, scheduled for January 15, and later, on January 25, the board superseded this regulation with a new regulation (Regulation B, Series of 1915) which materially softened the requirements which

must be met by eligible commercial paper when offered for rediscount. The Board left to each Federal reserve bank the right to determine the method of certifying the eligibility of commercial paper, thus enabling the reserve banks to frame their procedure with due regard to local conditions and customs.

The Board required in substance that any member bank applying for rediscount must certify in its letter of application, over the signature of a duly authorized officer, that to the best of its knowledge and belief the bill was issued for one of the purposes authorized by the Federal Reserve Act. The letter of application must also state whether the paper is depositor's or purchased paper or paper rediscounted for other member banks, and also whether statements are on file.

Regulation B provides that when it does not appear that such statements are on file, except in the three cases where statements are waived,—

the Federal Reserve Bank shall satisfy itself as to the eligibility of the paper offered for rediscount, and member banks will be expected to use such statement forms, identifying stamps, etc., as may be prescribed by the respective Federal Reserve Banks. Any member bank rediscounting with a Federal Reserve Bank paper acquired from another member bank, with the indorsement of such member bank, may accept such member's certification regarding the character of the paper and the existence of the necessary statements.

Statements of the borrower's financial condition may be waived where notes offered for rediscount have been discounted by member banks for *any of their depositors*, in three cases:

(1) If the bill bears the signatures of the purchaser and the seller of the goods and presents *prima facie* evidence that it was issued for goods actually purchased or sold; or

(2) If the aggregate amount of obligations of such depositor actually rediscounted and offered for rediscount does not exceed \$5,000, but in no event a sum in excess of 10 per centum of the paid-in capital of the member bank; or

(3) If the bill be specifically secured by approved warehouse receipts covering readily marketable staples:

Provided, however, That the bank shall certify to these conditions on the application blank in a manner to be designated by the respective Federal Reserve Banks.

These three conditions contemplate, in substance, the waiving of borrower's statements in the case of accepted commercial drafts and where the paper is that of the small farmer, business man or

retailer. It should be noted that the \$5,000 limit mentioned in paragraph 2 above does not necessarily contemplate that statements shall be offered where the borrower has *sold* paper to an amount exceeding \$5,000, but that the limit of \$5,000 covers the paper offered for rediscount. In other words, the borrower might have discounted \$25,000 worth of paper, but so long as the bank chooses to hold \$20,000 or more of this paper, rediscounting \$5,000 or less, the statement is not required. The third exemption covers, in substance, commercial paper secured by cotton, grain or other warehouse receipts. In this case the value of the collateral is presumed to be sufficient to warrant the waiving of the requirement of a borrower's statement.

The Federal Reserve Board has recommended that these requirements be imposed at once in the purchase of paper from note brokers. The regulation, however, does not become effective until July 15 of this year, thus giving the banks time to adjust their affairs to meet the requirements of the Board.

The Board recommends that every member bank maintain a credit file which "shall contain original signed statements of the financial condition of borrowers, or true copies thereof, certified by a member bank or by a notary public, designating where the original statement is on file. Statements shall contain all the information essential to a clear and correct knowledge of the borrower's credit and of his method of borrowing."

The Board specifies in a general way the character of information which should be in the credit files of member banks. Such files should contain information concerning the nature of the business or occupation of the borrower, the extent of his indebtedness and his financial responsibility. Where the borrower is a firm or corporation, a balance sheet showing quick assets, slow assets, permanent or fixed assets, current liabilities and accounts, short-term loans, long-term loans and capital and surplus should be at hand. Furthermore, the contingent liabilities, such as endorsements, guaranties, etc., should be set forth in detail, and information should be given respecting any mortgage debt and as to whether there is any lien on current assets.

It is too early to accurately estimate the effect of these requirements. The Board declares that in making the changes in its regulations, it "has not modified its views upon the general principles"

expressed in its regulations of 1914 "as being of fundamental importance in the best development of the new system."

The new requirements of the Board were prompted by a desire to slowly educate their customers in giving statements. The board in its 1915 regulations enjoins the member banks "to do their utmost to accustom their borrowers in furnishing such statements," even where the furnishing of statements is not required under the three classes of exemptions noted above. It is very clear to anyone who has carefully perused the regulations of the Federal Reserve Board that a progressive development in scope and detail of the regulations is contemplated, with a view to improving the general quality of commercial paper offered for discount, both through the exclusion of undesirable paper given by overextended borrowers and more particularly with a view to requiring the payment of paper when due, rather than its renewal, as has too often been the practice in the past. This work will occupy a period of years and if done carefully and without violent and arbitrary changes will be of the greatest assistance to the business men of this country. It will raise commercial paper to the proud position of being the best class of banking asset—a position held by such paper in every country in Europe. This will mean lower rates of interest to the business man and greater security in his dealings with the bank. With the paper of weak or reckless borrowers eliminated, the losses sustained by banks through the purchase of this class of investment will be materially reduced, thus leading to the investment of a larger amount of money in this manner.

The greatest incentive to increased investments in commercial paper by member banks will be the fact that commercial paper, meeting the requirements of the board, can be converted into cash whenever an emergency arises through the rediscount of it with the Federal reserve banks. This is the only class of banking asset which a bank may certainly count as being always liquid. Commercial paper will largely supersede the call loan as the secondary reserve of our member banks, thus diverting a large amount of money, which has heretofore, of necessity, been used in more or less speculative transactions, into commercial channels to the great profit of our country and the welfare of our banks.

THE FREE PORT AN AGENCY FOR THE DEVELOPMENT OF AMERICAN COMMERCE

BY FREDERIC C. HOWE,

Commissioner of Immigration at the Port of New York.

AN OVERLOOKED ELEMENT IN INTERNATIONAL TRADE

In the discussion and legislation now going forward for the reestablishment of the American merchant marine and the development of our carrying trade a very important, possibly the most important, of all elements has been neglected. And that is the necessity of cargoes, not only for incoming ships but for outgoing ones as well. In order to re-create our merchant marine and enter the field for the carrying trade of the world in competition with England and Germany, it is necessary that ships should be able to speedily and surely find cargoes. And neither the modification of the registration acts nor the acquisition of ships by the government will achieve the desired result unless provision is made for this primary condition as well. Incoming as well as outgoing cargoes are a *sine qua non* to the development of American trade and shipping.

The Opportunity. Several things coöperate at the present time for re-creation of our carrying trade. They are the European war, the opening of the Panama Canal, the amendments to the registry act and the new currency measure. Added to these is the substantial extension of the free list in the recently enacted tariff bill. The European war has closed the ports of Germany and Russia. It has dislocated the carrying trade of England, Belgium and the Mediterranean countries. The Panama Canal brings South America close to North America and also opens up the trade of the Orient to us. We now have the financial machinery for the transaction of a world business through the establishment of subsidiary banking branches, while our attitude of friendly neutrality to all of the nations involved in the present war lends a strong moral influence to the development of American trade.

The Present Carrying Trade of the World. It is the countries that have substantially free trade that do the carrying trade of the world. They are England, Germany (through her free ports),

Belgium, Holland and Denmark. The great bulk of the carrying trade is done by Great Britain, because she is a free trade country, and a reference to the rise of British shipping in the years which followed the repeal of the corn laws shows a tremendous and immediate increase in her oversea trade following the establishment of free trade. For fifty years she has been mistress of the seas for the very simple reason that ships could come to her ports from all over the world; they could there discharge their cargoes and find other cargoes awaiting them without delay. Here there were no obstacles, obstructions or tariff barriers to interfere with traffic. All history is unanimous in its demonstration that carrying trade will go hundreds of miles to escape tariff barriers. Protective tariffs killed the Spanish trade; they destroyed the rich and prosperous cities of the Netherlands. They killed our own foreign shipping; for commerce hates tariff barriers. In recent years Germany has begun to compete with Great Britain for the carrying trade of the world. She has been able to do this through her free ports, which have existed in Hamburg, Bremen and Lübeck, ever since the Franco-Prussian war. These concessions were insisted on by these old free cities when they entered the Empire. And by Imperial law there exists in the harbor of these cities a large free harbor, into which ships can come and go without the payment of customs duties upon their cargoes. By this means a free counter is provided, across which goods can be exchanged and trans-shipped to other destinations. Or they can be placed in great storage warehouses, where they can remain for an indefinite period until cargoes have accumulated for other ports. If desired they can be shipped at any time into the Empire on the payment of the customs duties. These ports have grown with great rapidity. Here cargoes can be broken and new ones made up. To these ports ships can come from any place in the globe with the assurance that they will quickly find outgoing cargoes to some other destination. The free port has contributed greatly to the upbuilding of German shipping.

THE PROPOSAL

America cannot hope to establish herself as a clearing house of the world until cargoes exist with which to fill ships' bottoms. For ships must be filled not only going but coming;

they must be able to change their destination and do a tramp trade. As it is now, we have cargoes of raw materials to European countries and some outgoing and incoming cargoes to South America and the Orient. But our protective tariff prevents the importation of European wares and compels a large part of the trans-Atlantic shipping to go empty one way.

How can this obstacle be overcome? Aside from a policy of free trade the only other alternative is the development of the free port idea along the lines of German experience. And the suggestion is that Congress should provide for a half dozen free ports as an experiment; three of which should be on the Atlantic seaboard, one on the Gulf, one at Panama, and one or two upon the Pacific Coast.

Quite obviously these free ports should recognize existing transportation and industrial conditions; they should be linked up with rail transportation. The leading Atlantic ports are New York, Boston, and Philadelphia. And New York and Boston have admirable natural advantages and harbor facilities for the planning of such ports. New Orleans is a natural port upon the Gulf of Mexico and may become a port of great prominence in connection with the Panama Canal traffic. Upon the Pacific coast San Francisco, Los Angeles and Seattle are all ports of importance, all of which either own or plan to own a comprehensive system of municipal docks. These would seem to be the natural harbors for the making of preliminary experiments. In addition, all of these cities are rail terminals and have a substantial industrial life which would be quickened by contact with the free port idea.

These ports might be opened in cooperation with various cities. Or it might be provided that any city with a certain amount of customs receipts that offered dockage for a free port would be entitled to enjoy this privilege. This would be an encouragement to cities to acquire and develop their own docks and harbors, which for the most part are in the control of private interests.

Into these ports ships could come from all over the world, from Europe, Africa, Asia, and South America. Here their cargoes could be placed in warehouses without the payment of customs dues; or cargoes could be broken and re-made. Goods which remained in the warehouses would be placed in bond, as is now done for importers.

In addition to the obvious advantages from the re-creation of our shipping, the diversion of trade to American ports would cheapen the cost of living. It would add other business, for periodic surpluses of goods would accumulate, which would find their way into the country, and would also place near at hand many materials needed in industry.

The free port would offer great opportunity for financial operations, now made possible by the recent currency act. It would stimulate international banking, and would tend to shift the financial center of the world to this country. And America, by the logic of events, has become the natural center for the world's financing, just as London became that center several centuries ago, when it shifted from the cities of the Netherlands. But the financial center will only move to this country when it becomes a clearing-house of goods as well as of money. For credit the world over is created by currently created wealth in transit or change, so that even our financial expansion is dependent upon the opening up of American ports to the clearance of the wealth of the world.

Now is the opportune moment for the development of this policy, while the ports of many nations are closed to trade. In addition, South America, the Pacific Islands, and the Orient have become more accessible to our ports through the Panama Canal than they have to the older ports of Europe. There is every reason why many of these countries should prefer to trade with us. But they can only do so when ships are in a position to earn the same return from our ports that they now earn from the ports of England, Germany and the other countries of Europe.

THE FREE PORT OF HAMBURG

Description. When Hamburg entered the German Empire in 1871 the city retained the right to remain a free port, which it had been in substance for centuries. The greater part of the port was set aside as a free port outside the customs union, as the whole city had been before. The Empire contributed 40,000,000 marks toward the construction of the free port, while the city contributed about 150,000,000 marks.

The free port consists of a large number of basins, many of them cut into the land, with quays jutting out into the river. Upon these quays are railroad tracks with cranes for the easy transfer of

freight into the near-by sheds. In the larger outside basins are many mooring posts which provide anchorage for vessels transshipping cargoes in the stream.

As a part of the free port many warehouses are operated by the port authorities. Goods are stored in these warehouses for re-export or for ultimate consignment into Germany or the other countries of Europe.

The free port is considered by the customs department as foreign territory. It is surrounded by a customs line guarded by customs officials. The line is designated by high iron palings upon the land side, while along the river is a floating palisade with an imaginary line across the river, guarded at either end by customs officials. At the land and water entrances of the free port are customs booths at which duty is paid on goods when they enter the Empire.

All of the Hamburg pilots are *ex-officio* customs inspectors. Under their guidance ships pass to their berths in the free port unmolested by customs officers. There are no declarations of dutiable goods to be made; no customs officials are taken aboard, with the delays attendant upon their presence. When a ship is cargoes ready for sea a customs inspector-pilot takes her from the free port to the mouth of the river. At no time is any other representative of the customs service aboard the boat. There is less hindrance to the free movement of the ship than in the free ports of England.

The free port contains such industries as are incident to the care and feeding of the employees; shipyards for repairs; and other industries relating to the building, outfitting and provisioning of ships. In addition there are certain rice-mills and oil-mills. About 15,000 workmen are employed in the free port, but at least 12,000 are employed in the shipyards.

German export produce is loaded to the outgoing ships by big river barges of from 600 to 800 tons' capacity, or by harbor lighters of about 60 tons. River barges are only permitted when they contain at least 50 tons of freight.

The cargoes of very many vessels are handled in mid-stream at the mooring-posts, nearly one-half the tonnage of the harbor being discharged in this way. By this means the capacity of the port is doubled.

Administration, Cost, Etc. The warehousing business of the

free port is in the hands of state control, and is partially privately operated by the warehousing company which erects warehouses upon public lands in the free port. The company issues warrants transferable to order on goods stored in the property. A portion of the net profits has been set aside to create a fund for the acquisition of the company's stock by the state, which will eventually become the full owner of the property by this process. Over 1,000,000 square feet of ground are covered by the warehouses, which contain 5,500,000 square feet of storage space.

The port is not operated to yield a return on the investment, but to develop the prosperity of the city. Low tonnage dues are collected on these ships and for the use of mooring posts, but all these dues are very low. The largest ship that can come up the Elbe and discharge at mooring posts has to pay only \$11 for discharging in mid-stream.

Collection of Customs Dues. The method of collection of import duties on goods passing from the free port to the Empire is as follows. A line of custom houses is maintained about the free port. Goods imported may pay the duty on the spot, or the importer may have a running account against a deposit made by him in the form of German government securities, against which the custom dues are debited.

For the further convenience of importers, goods may be shipped with a customs certificate, under which they are forwarded to the inland consignee, who has to pay the duty on delivery. This system is permitted to Hamburg firms who are well known, without a deposit being required. And goods forwarded in transit through Germany to other countries are handled in the same way, provision being made for the collection of the duty from the ultimate consignee. Other conveniences also exist for the easy importation of goods.

The Commerce of Hamburg. Hamburg is the second seaport in the world, its total foreign commerce being only \$6,000,000 under that of New York in 1913. The total foreign commerce of the port is \$1,960,000,000. It exceeds that of London by \$100,000,000, and far exceeds Liverpool in imports, although England is a free trade country. The growth in recent years has been enormous. Germany has become a great carrying nation within very

recent years. Undoubtedly a large part of this is due to the fact that Hamburg, Bremen and Lübeck are free ports.

Sixty per cent of the maritime commerce of Germany and 40 per cent of its entire foreign commerce passes through Hamburg.

The following statistics are indicative of the sea-going commerce of Hamburg. They are for the year 1907:

	Number of vessels	Net register of tons
Arrival.....	16,473	12,040,000
Departure.....	16,507	12,103,200

The commerce for the same year, 1907, was as follows:

	Weight—Tons	Value—Marks
Imports.....	14,670,200	3,577,314,700
Exports.....	6,142,200	2,802,218,100
Total.....	20,812,400	6,379,532,800

A part of the exports are of German products, but a large part are goods trans-shipped in the free port and reexported to other countries. A large part of these reexports come from the Orient, North and South America, the Mediterranean and Africa. Among the leading articles of reexport are the following:

	Imports	Exports
Coffee.....	205,000,000 marks	81,500,000 marks
Wood.....	205,600,000 marks	49,000,000 marks
Vegetable oils.....	42,400,000 marks	47,000,000 marks
Rubber.....	117,400,000 marks	39,500,000 marks
Cotton.....	160,400,000 marks	38,000,000 marks
Cocoa.....	72,500,000 marks	35,000,000 marks

It is estimated that about one-fifth of Hamburg's exports in volume and in value are reexports through the free port. They amounted in 1907 to 1,350,000 tons.

OPINIONS ON THE FREE PORT

Mr. Edwin J. Clapp in his treatise on *The Free Port of Hamburg* says:

The first advantage of the free port is in facilitating reexportation; indeed the importance of the reexportation trade is large and, above all else, led to its creation. In the free port foreign merchants can maintain sample or consignment stocks. Bonded warehouses do not offer the same opportunity for unhindered movement of merchandise within a port. Everything must be done under the control of customs men. In Hamburg there is no need of counting and verifying

pieces when a reëxportation is made. A bonded warehouse cannot offer the same facilities for various manipulations necessary to prepare the goods for the consumer, such as cutting wines and mixing coffees.

Perhaps the chief advantage of the free port lies in the facilities it offers for the rapid, frictionless discharge of ships with dutiable goods, whether destined for reëxportation or shipment inland.

The free port of Hamburg lets the Hamburg merchants store their goods duty free and offers them complete freedom of manipulation for reëxporting them or for sending them inland, as the market dictates.

Sir Charles Malcolm Kennedy, head of the commercial department of the foreign office of England, says:

In countries where high customs duties are levied and where fiscal regulations are rigid, if an extension of foreign trade is desired and the competition which it involves is a national aim, special facilities must be granted for this purpose. In these circumstances a free zone, sufficiently large to admit of commercial operations and trans-shipments on a scale which will fulfill these conditions (watched but not interfered with by the customs), becomes indispensable. The German government has maintained a free zone of this nature at Hamburg.

Colonial free ports such as Hong Kong and Singapore do not interfere with the uniformity of the home customs and excise policy. These two harbors in particular have become great shipping resorts and distributing centers. The policy which led to their establishment as free ports has certainly promoted British commercial interests.

RECAPITULATION—ADVANTAGES

(a) Without exception the free ports—those of England, Hamburg, Bremen, Lübeck, Antwerp, Copenhagen, Hong Kong and Singapore—are among the commanding ports of the world.

(b) The free port will aid in the reëstablishment of American shipping; it will furnish cargoes going and coming, as well as employment in the harbors.

(c) It will link the United States with South America, Asia and Africa by trade connections which will tend to the promotion of friendly relations to the commercial advantage of each, and will supply an easier outlet for American goods.

(d) The most important gain is the direct gain to America. It will cheapen commodities by bringing great quantities of goods to our doors for importation or export, as trade needs demand. It will stimulate the growth of exporting houses, which can hold goods for an indefinite period without the payment of tariff dues (often equal to the cost of the article itself) for disposal to meet the

trade demands of the whole world. It will upbuild international credit, and shift to America an increasing and ultimately a predominant share in international exchange. It will also aid American manufacturers in need of foreign supplies, who will be able to secure them at American ports of entry, in which merchants can exhibit samples, can mix, grade and alter for domestic or export use, and to which buyers from America and other countries can come as to a great market-place in which commodities of the world are exhibited for purchase and sale.

In addition the opening of the Panama Canal will still further dislocate the trade routes, just as did the opening of the Suez Canal. It places New York, New Orleans and San Francisco in a far different relation than they previously occupied. The recently inaugurated federal reserve currency bill makes possible the development of international credit, which will be largely aided by the up-building of oversea traffic, with the consequent merchandizing and consignee houses that exist in countries where free trade exists.

Finally, America is the natural country to be the counter of the world. Its seacoasts face every other continent; it is the greatest of all reservoirs of raw materials and foodstuffs. In iron and steel and standardized production it is in a position to compete with the world. But international trade (and this is always overlooked) must be reciprocal. It cannot be one-sided. And credit balances cannot for any prolonged period be paid in gold. They can only be paid by exchange of wealth.

THE MODERN TERMINAL PORT

BY WILLIAM JOSHUA BARNEY,
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Efficient terminals are today essential to social and economic advancement. Among railroad men, the great problem of transportation is the cost and speed of handling goods through the terminals. On the main lines of the great railroads, little improvement can be made for speed and economy. Millions, therefore, are being spent by the railroads to make their terminals more convenient and efficient for passengers and freight.

All the great ports on the continent, from Montreal all the way round to Seattle, have paid out large sums of money to experts to plan their terminal ports. They have spent millions in construction—much of which has been expended to modernize and to correlate existing piers, sheds and waterfront railroad yards. On every hand, corporation and public authorities are beginning to concentrate brains and capital on the problem of the modern terminal.

The "modern terminal port" may be defined as "a terminal of terminals" and is a more inclusive term than "The modern terminal." The latter phrase is too often limited by custom to a railroad terminus, whereas the terminal port involves the designing and constructing of piers, bulkhead, wharves, pier sheds, warehouses, mechanical equipment, lighting, heating and also railroad tracks and yards, and railroad equipment in all its complexities. In generalities, it requires wide and experienced imagination for the proper planning of future facilities, tempered by a proper sense of proportion as to financial and commercial expectation. In administration, it demands tact and executive ability to adjust and correlate existing enterprises, and to bring many varied interests into one harmonious whole.

This science of creating terminal ports is in its infancy in this country. Its principles are known to a few, its importance realized by a moiety. Its literature is comprised in random articles and papers before societies. It is a science, therefore, to advance

which will pay the individual by its very scope and by its opportunities to contribute to its literature and recognition. A study and dissemination of its principles and importance should appeal strongly to municipal and national patriotism. Many of our ports—sea, lake and river—are having but a tithe of their full prosperity, because their citizens fail to realize that antiquated wharves, uncorrelated with the railroads, strangle growth in wealth and population. In contrast, the modern prosperity of Hamburg, Liverpool and New Orleans is resultant from their terminal ports, the existence of which is largely due to the energetic realization by their citizens of the necessity for such terminal organization. The people of a city must be in insistent accord with terminal development for it to advance effectively—and authoritatively informed leaders are needed to create this popular accord and understanding.

The old simile that transportation ways are the arteries of a civilized state should be carried further to emphasize that the terminals of transportation, especially waterfront terminals, are the heart centers. Even with the best of arteries, if these heart centers are clogged, there is an unwarrantedly slow and costly circulation of freight and food supplies. Viewed from this angle, the terminal organization of the city becomes of utmost importance to the economist and social worker. In fact, bad terminals are prime contributors to the high cost of living, since they result in confused masses of freight passing in and out of the city at exorbitant cost in time, labor and money.

For example—a truck farmer of Staten Island, one of the boroughs of Greater New York, leaves his farm before midnight to drive slowly into the great wholesale district along Greenwich Street on the lower west side of Manhattan. He arrives there early in the morning and disposes of his produce and returns home. That evening is placed on his neighbor's table some of the same food so laboriously taken to Manhattan in the morning, for the local grocer has followed behind the farmer some four or five hours later, purchased his vegetables from the wholesale man in Manhattan and brought them back to Staten Island. Food cannot be moved ten or fifteen miles and returned without someone having to pay for the unnecessary hauling.

This condition obtains for practically all the great city of New

York. Through trade customs, prestige and organization, practically the entire wholesale food business of New York, save meat and fish, is contracted into a few blocks in the lower west side of Manhattan. To this center all food supplies are trucked, usually under crowded and congested conditions, and are likewise trucked away to the various retail dealers, many of whom are located only a few blocks away from an original point of entry for such supplies.

This problem of sub-dividing the market center is now engaging much attention in New York; and unquestionably, at no distant date, the Bronx, Brooklyn, Queens and Staten Island will be provided with their own market terminals, served by direct railroad connection and by lighters and small crafts. Such rearrangement of market facilities provides an excellent opportunity to introduce modern sanitation, both in the construction and inspection, which is sadly lacking in the markets of most American cities.

Practically every city thus illustrates, in one way or another, how directly poor terminal arrangements affect the cost, comfort and sanitation of living. Therefore, when studying a city and its life, the student of theoretical economy or the direct worker for social betterment should first look into the terminal conditions, for in them only too often will be found the source of the community's economic and sanitary problems. The science of terminal planning thus becomes a touchstone of great value to the economist and sociologist. To this end let us consider the elements and the characteristics of the modern terminal port.

Reverting to the first definition of a terminal port, "a terminal of terminals," there are two phases to consider—first, the individual terminals of a port which may be based on one pier or many; second, the interrelation of these individual terminals in forming one composite whole.

The individual terminals may be advantageously classified with reference to the origin and destination of the goods or freight passing through them. In these classifications, as in grouping generally, clear-cut lines of division are assumed for discussion, but do not occur in reality, since practically all classes of goods in small or great quantities will pass through every terminal. One type, however, usually so predominates that the terminal may be placed.

First, there is the trans-shipping or import-export terminal.

Such a terminal is primarily a point of interchange between the railroads, river crafts, coastwise steamers, and oversea ships. Goods are received from all parts of the country, assorted and assembled into cargoes for export; in the same manner cargoes from abroad are unloaded, classified and distributed throughout the country.

The characteristic of the trans-shipment terminal is that it forms a community or center of business, that may be, in fact should be, located in the outlying sections of the city, since the freight there handled is not destined for the city proper: for example, Tillbury Docks, some eight miles below London, or the trans-shipping sections of the great terminal companies in the outlying sections of New York.

In the second class of waterfront terminals is placed the industrial terminal. Through this type of terminal, raw goods pass into the city to be manufactured, and the finished articles pass out. In its highest form, such a terminal is really an industrial area fed by railroads at the rear and by vessels on the waterfront. This terminal requires a larger space than the trans-shipping terminal for its proper development and has a closer relation to the city activities, since the many people employed in the factories and warehouses require homes adjacent; and the salesrooms and general offices of the industrial concerns should be convenient to the general public.

The third type of terminal, the city terminal, is more intimately involved in the life of the city than the industrial terminal. Through the city terminal are handled the articles for daily consumption, such as foodstuffs, and for local use, such as building materials. On the waterfront, such a terminal should be located close to the heart of the wholesale and retail districts, and should provide facilities both for large and small crafts; and should have trunk line connections to its switching tracks and sidings.

In a fourth class is the city-railroad terminal. At most ports it is possible, in a large measure, to separate the local railroad service from the local waterfront service. Thus the shore front and adjacent areas are not preempted or congested by railroad yards and freight yards, which may be well placed to the rear or landward side of the city. In fact, these railroad terminals for handling city-railroad freight should only intrude upon the water-

front under peculiar conditions, such as obtain at New York and San Francisco.

Another type of terminal, not existing in this country, is the free port. A free port is in a protective country and comprises a definitely bounded shorefront and adjacent upland which is regarded as foreign territory in respect to the imposition of tariff duties. Its waterfront is a port where freight from the protected hinterland and from abroad may be assembled for trans-shipment to foreign countries without custom inspection or payment of duties. Its upland is an area, separated from the protective country by definite custom barriers wherein raw materials and products from inland and abroad may be gathered and manufactured for exportation to foreign markets without custom supervision and charges.

Merchandise and raw materials may enter a free port of the protective country from any direction without custom restraint; but can leave free of duty only for foreign territory—unless previously entered into the free port under a drawback. Goods crossing the custom barrier into the protective hinterland must pay duty as though the shipments were from territory actually foreign. A free port, therefore, combines in reality the characteristics of the trans-shipping and of the industrial terminal, but isolated by custom restrictions and with the necessary physical barriers to enforce the same.

Lastly, there are the terminals for passengers which in reality are another form of freight and a form that has an influence out of proportion to its importance, especially in marine terminals. In our larger cities the railroads have separated their passenger and freight stations, placing the former as close as possible to the center of the hotel, shopping and commercial life; the latter, in outlying and less valuable sections. Unfortunately the separation of passengers and goods is not practical in marine transportation;—except under the rare conditions obtaining at Liverpool, where passengers are discharged at a landing stage and the vessel then warped into a dock for the handling of cargoes. For physical and financial reasons passengers and freight must usually be landed at the same wharves. The passenger is constantly insisting that the landing be nearer and nearer to the center of the city, whereas the efficient and economic handling of the cargoes may require outlying or

trans-shipping terminals. In this conflict, unfortunately, the passenger freight has frequently prevailed over the inanimate cargo with consequent congestion and higher costs to the city and country in order to save its passengers a few minutes' inconvenience or delay.

A terminal location is often selected because the land is cheap or has features that permit less costly construction; yet the location so chosen frequently imposes a permanent tax on the community by unnecessarily high handling charges because no consideration was given to the class of freight to be handled, or frequently the same results are imposed by the growth of the port. Therefore the classification of terminals with regard to the origin and destination of goods is a valuable guide to the investigator in analyzing the advantages and drawbacks of a terminal port, or to the expert in planning future facilities.

With the location of the terminal analyzed, the plan or arrangement for the terminal itself may be considered. In all plans for the various terminals are found practically the same features, wharves, transit sheds, warehouses, railroads, tracks, mechanical equipment, etc., but varied and emphasized to meet the conditions and requirements of the particular terminal.

In this country with moderate rise and fall of tides, the shorefront has been improved under two general schemes: the first, the pier and slip plan; the second, the quay plan.

In the first system, wharves, termed piers, are built from the bank into the fairway or stream with water slips or artificial inlets between them, in which the ships lie along the wharves while discharging their cargoes. The shorefront proper from which the piers spring is usually retained by a bulkhead. The great attraction of this system is that, for a given length of shore front, the lineal feet of wharfage or berthing space may be greatly increased. It has therefore been generally adopted in ports where the area of the harbor, or the width of the stream, is sufficient to permit these projecting piers without narrowing the fairway or channel so much as to interfere with the ready and safe handling of vessels.

On the other hand, piers and slips have certain disadvantages. Frequently in the desire to obtain a larger ratio of wharfage to shorefront, piers are made too narrow for their length, which results in costly congestion in the handling of freight. All freight

handled between the pier and the mainland must pass in and out of the door or doors at the shore end of the pier, which in too narrow a pier, like the neck of a bottle, prevents rapid handling of freight. This pier congestion has been avoided in modern designing by making the piers of ample width, two hundred and fifty feet to three hundred feet for large vessels. The central strip of such a pier is usually reserved as an open driveway or street. The pier thus becomes, in fact, a projecting quay. If the tidal movement or the stream current is very swift, it becomes difficult for vessels to warp in and out of the slips. However, practically all the great ports of this country, except New Orleans, are developing under the pier and slip plan.

The quay system of improvement has been extensively followed by river ports, our most important example being New Orleans. In a quay development, the natural shorefront is retained by bulkhead walls forming quays, and the ship lies parallel with the shorefront, instead of at various angles as under the pier and slip plan. There is thus little projection of structure or traffic into the stream which is therefore fully available for the navigation of vessels. For this reason, the quay system is particularly advantageous for terminals along narrow fairways.

The movement of freight across a quay is less crowded and more rapid than the movement of freight down a pier. Cargoes landed on a quay and placed under a shed or open platform may be removed by railroad cars or trucks at many points along the back of the shed or platform without congestion. In other words, the quay movement of freight is lateral and direct from the ship to the hinterland, whereas, on a pier, the movement of freight is always at right angles from the ship along the pier; and, in distribution, goods must all pass through the one exit.

The type of shed placed upon the pier or immediately along the quay is governed largely by the class of terminal or of freight handled. Where the sheds serve merely as temporary coverings for merchandise which is rapidly sorted and delivered, the shed may be one or two stories—in fact, as at Antwerp, may be merely open sheds or roofs to keep off the rain. On the other hand, where goods are to be assembled to accumulate cargoes, it is desirable to increase the direct waterfront storage, and frequently three-, four-, six- and even eight-story warehouses are placed immediately along

the wharf front as instanced by the new warehouses at Rotterdam and Manchester. Frequently much expense in handling goods could be avoided by having available such waterfront storage, instead of requiring, as is common in our American ports, the cargoes to be landed at a wharf and then removed with several handlings to storage houses located two hundred feet to four thousand feet inland.

As to the location of railroad tracks on the wharves, there is much difference of opinion, largely due to local traditions and the failure to recognize that an arrangement efficient in one terminal for certain goods will not answer in another though adjacent terminal where a different class of freight is handled. For example, in the trans-shipping or import-export terminal where there are large movements of bulk freight directly between the railroads and the steamers, unquestionably part of the tracks, at least, should be located directly along the edge of the piers or quays, and cranes or tackle masts provided for the rapid interchange of freight between the cars and the steamer.¹ On the other hand, in city terminals where the land movement of freight is largely by trucks, railroad tracks should be relegated to the convenience of the trucks and placed in the center of the pier or to rear of the quay sheds with frequent track-crossing at grade for the trucks entering and leaving the shed of the trans-shipping or general terminal. Montreal is an excellent example of an efficient pier and slip terminal; and New Orleans, of quay terminal.

In industrial terminals, goods are not to remain on the immediate waterfront longer than necessary, since the raw goods are to be rapidly taken to the factories and the finished articles shipped on delivery. Therefore, every facility should be afforded for the rapid movement of freight between the factories and their storehouses and the wharves. Clear driveways for motor trucks and pier autos should be available and railroads should be placed on the wharves only where they are real adjuncts for the quick handling of local freight. In an industrial terminal the railroad service should be provided with a local classification and switching yard

¹ Even under these conditions, the necessity of customs examination frequently tends to prevent this quick, direct interchange to such an extent that the railroad tracks are better placed behind the landing platform (or away from the pier edge) on which the customs inspection is first made. The elimination of this hindrance to direct interchange of freight between the vessel and railroad is a prime argument for free ports.

having connecting tracks to the wharves, factories and trunk lines. It is especially important that the factories have sufficient railroad sidings connected with the trunk lines, since many of the goods manufactured will be shipped throughout the country and raw goods delivered from the country at large.

Among the most striking examples of industrial terminals in this country are those on the properties of the New York Dock Company and the Bush Terminal Company on the eastern side of New York Harbor. These terminals show wharves served by railroads and backed by warehouses, and behind the warehouses, concrete factories, each served on the one side by railroad spurs and on the other accessible by streets leading to the city proper, and adjacent thereto classification yards with connections to the trunk lines. Equally prominent are the nearby modern flats for the industrial population. Such industrial centers are, in reality, model terminal cities within or adjacent to the city itself, but not so interwoven with the general city activities as to cause expensive congestion in handling in and out raw goods and manufactured articles.

It is well to emphasize here that the surest way to secure for a community permanent and rapid growth in prosperity is to encourage its industrial enterprises. Many cities, especially ports, have had their beginnings and first prosperity in serving as entrepôts. Chicago and St. Louis are striking examples of railroad centers, whose first greatness lay in their being important transshipping cities; but today the underlying wealth and prosperity of these and similar inland cities are in their great industrial enterprises. New York, from its early days, has been one of the world's transshipping centers, but New York's great growth in wealth and population is derived largely from its being the greatest manufacturing city of this country.

The factories and industrial works in these cities draw a large laboring population—requiring new homes, service, etc.—and are constantly attracting new capital—thus, the cycle of growth is assured. In contrast, Antwerp, before the war, recognized as one of the leading entrepôts of northern Europe, had a comparatively small population and without industrial enterprises was growing but slowly. Even the great port of Liverpool is being overshadowed by the industrial city of Manchester. The economist, there-

fore, should inquire carefully into the present industrial enterprises of the community and eagerly seek for means to expand them along modern terminal lines.

After this summary of the various terminals forming a modern terminal port, there is to be considered the essential for joining these terminals into "a terminal of terminals." The individual terminals must be organized and correlated into the terminal port so as to permit the rapid and cheap interchange of freight. The medium for this interchange is the connecting or belt line railroad running between the various railroad terminals, the maritime terminals and the industrial areas and also reaching into the wholesale and often the retail districts.

Mere points of contact for switching between the various railroads will not serve this purpose. Experience shows that a car starting from a railroad on one side of the city to be switched over the tracks of several other railroads to a factory or pier on the other side will be subject to numerous delays and high charges, but, if a terminal port is served by a belt line—private or public—such local transfers and interchanges are made quickly and at low cost.

The belt-line installation, therefore, is today a recognized and sought for complement of terminal development. One of the great current questions in New York is the proper method of installing such lines to link up the many terminals of this great port—thousands of dollars and years of study and many adjustments and concessions mark the steps of New York's endeavors for this necessity.

New Orleans openly lays much of her recent growth and prosperity to her excellent belt-line service. New Orleans' belt line serves the entire harbor front, taps each railroad entering the city, serves the wholesale district and is now being extended to outlying tracts of land in order to encourage the establishment of manufacturing and industrial enterprises. Of these, New Orleans has comparatively few, and her able citizens have publicly adopted the slogan that much of New Orleans' future and growth depends upon securing factories and industrial centers and that the readiest and surest means of so doing is to expand and improve the belt-line service.

In a paper before the American Association of Port Authorities, the Hon. William B. Thompson, President of the New Orleans Public Belt Line Commission, summed up the meaning of the belt-

line service to New Orleans by stating that before this installation, local switching charges amounted to from \$13.00 to \$15.00 per car with a delay in many cases of several days at least, whereas, today, the same service is rendered for \$2.00 a car flat and is performed quickly and in close coöperation with the shipper's interest. San Francisco and Montreal emphasize what New Orleans teaches; likewise, St. Louis, Cleveland and many of the inland cities show great advancement in prosperity from the dates of their private belt-line installations. Practically none of the great foreign terminal ports in the cities of northern Europe is unprovided with belt-lines. Some of these cities have gone even further, in that they provide not only engines for transferring the cars of other railroads, but provide also cars to be shipped out over the trunk lines. Local enterprises thus have no delay in securing empty cars to send out raw goods or manufactured articles.

In addition to these physical aspects, it is of equal importance, in creating the modern terminal port, to consider the organization for administration and finance, especially of the waterfront or port proper.² Experience has shown that it is both impracticable and undesirable to secure the needed correlation of piers and terminals for the modern terminal port by means of private control. If the returns on capital invested are made sufficient to admit private enterprises, port charges then become a burden on the commerce which therefore is deflected to other places. Such terminal organization frequently requires radical changes in the plan of the port and also of the city back of the waterfront, power to make which changes can be rarely delegated with safety to private enterprise. On the other hand, publicly invested capital requires a low rate of interest, especially where a community is to derive great benefits by increased commerce, increased population and increased industrial development—all of which follow closely upon a wise development of port facilities. Further, to public officials under proper control, large legal powers may be safely granted for condemnation, for the organization and operation of terminals and for other port services. These influences and the more or less unconscious realization of the above facts is bringing about a wide demand for the public administration of port facilities.

² Excerpts from author's paper on *Port Administration* before the American Association of Port Authorities.

From a broad survey of successful ports it is conclusively shown that continuity of good port policy, consistency in proper port planning and development, and properly used autonomy of port administration are the three administrative essentials for the successful upbuilding of a great terminal port.

Continuity of a good port policy gives to commercial and maritime interests a reasonable assurance that desirable conditions will continue, such as equality in charges, impartial methods of obtaining wharf facilities, similar terms for tenure of piers and wharves and a steady improvement of transportation facilities. These strongly tend to a steady growth of commerce and trade. Opinions will differ as to what constitutes a "good policy." Local traditions, trade customs and laws all tend to modify any standard pattern, but in port administration as in business management the fundamentals are honesty and impartiality.

Consistency in proper port planning and development is somewhat a correlative to continuity of port policy, yet is as essential to the successful growth. If piers are built here, there and everywhere without regard to their purpose, without the means of economic interchange of freight and no systematic provision made for future extension, congestion of the most expensive kind will inevitably result and the free circulation of traffic will be made impracticable.

Autonomy of port administration is requisite, otherwise the port revenues, which are taxes upon the commerce of the country, may be diverted to supply local needs of the seaport town; and, as is too frequently done under inefficient municipal government, so expended as to bring little returns to the community and none to the development of the port facilities. Autonomy of port affairs further means freedom from local politics and tends to insure continuity of policy which otherwise would be changed with each shift of the local government. Unless greatness is thrust upon a harbor by overwhelming natural advantages or by a peculiar combination of financial interests, experience shows that a harbor will become a great port in so far as its administration possesses the above attributes.

Continuity of port policy may be secured, first, and obviously, by a system of port government in which the officials by law or custom hold long tenure of office; second, where the general public

or citizens of the port have a thorough understanding of a correct policy and insist that it be followed. Continuity of port policy in this country has been greatly retarded by the difficulty of securing either of the above conditions. The essential principles of our form of government do not encourage long tenure of office by public officials, even in local affairs. Hence port officials, usually subordinate to municipal or state government, are constantly changing with the political vicissitudes of succeeding elections. On the other hand, the citizens in many of our ports have little direct concern or interest in the development of the waterfront. A large majority of the more influential and intelligent men have their energies directed to the development and progress of their mines, factories and railroads throughout the country and little if any of their time or thought is given to the harbor. Under these conditions a municipality is rarely, as a community, interested sufficiently to insist upon any continuity in the handling of port plans and policies. This is in contrast to many of the continental ports, whose history, growth and business center around the port activities. A large proportion of their citizens in daily business depend directly upon the success of the port for the success of their own affairs. This public interest and the traditional retention of competent officials have made many European ports, despite great natural handicaps, keep place among the great ports of the world.

Consistent and proper port planning is obviously more readily contained where port policy is stable. On the other hand, many cities whose maritime growth is patently suffering from poor administration have adopted and are developing under excellent plans, though in turn their proper physical development suffers in common with the commercial growth from inefficient or changing administration. Progress towards proper terminal development under such conditions may be slow—at times even retrogressive; but even such halting progress shows the great value and necessity for proper port planning.

Complete autonomy of port administration is not found in this country, though every element of administrative autonomy may be instanced by the administrative powers of the various American ports. One port possesses wide discretion as to public organization and operation of terminal facilities; another port

lacking in this respect is authorized to finance its improvements with almost as much power as a private corporation.

As the necessity for scientific management of port affairs is more widely realized by the public, the tendency in this country is to grant wider and more efficient power to those entrusted with port affairs. The governing officials of many British ports are already as free to act in their judgment and discretion as the officials of private corporations. Such ports as Liverpool and Manchester are strong arguments for autonomy in port administration.

These general conclusions and statements relative to port administration form suggestions to the political economist of opportunities for forceful and valuable work to be done.

Space does not permit the illustration of the general principles above outlined by a discussion of the various ports of this country and Europe. Those, however, who are interested in following up such detailed discussions may turn to the various papers by eminent port and terminal authorities published in the Proceedings of the American Association of Port Authorities.

In conclusion—the science of terminal and port planning deserves the most thorough consideration from everyone interested in advancing the social and economic welfare of our great cities; it is a science so young that it affords a wide field in which to win recognition; it needs the ablest of men to set forth its principles and to practice them and above all to arouse the citizens as to the advantage, or rather, the necessity, of appropriating money and time and confidence for terminal projects.

THE WATERWAYS AND COMMERCIAL EVOLUTION

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I. During the forty years prior to 1870, the canal barge and river steamer were potent agencies in the promotion of the settlement and industrial occupation of the national domain and in the creation of wealth by making mutually available the interior resources of a virgin continent and the markets of the world. Still earlier in our history, the economic development of the seaboard country of the East and South was made possible by water transportation, and the growth of population and accumulation of wealth were there geographically correlated with natural harbors and navigable rivers over which goods were moved in domestic exchange and admitted to the channels of foreign trade.

With few exceptions, the great American cities of today owe their relative superiority to natural advantages of location with respect to navigation or to tactical initiative in the construction and use of artificial waterways.

No argument is needed to demonstrate the benevolence of nature toward pioneer industry and commerce in the provision of inland waterways on the continent of North America. Over one hundred streams were adequately navigable to the primitive commerce of the Atlantic slope, and the power development at their fall points was a gratifying stimulus to manufacturing industries which gradually sprang up to add their products to the cargoes of raw materials from the forest and farm.¹ Not counting the Mississippi, perhaps fifty streams having a navigable mileage of over 5,000, nearly equivalent to that of the Atlantic-bound rivers, afforded natural trade routes for the products of the plantation country bordering the Gulf of Mexico. These river channels, together with the favorably disposed coastal waters of the Atlantic and the Gulf, constituted a free and ready-made highway of essential importance during the initial period of the country's development.

¹ Report of U. S. Commissioner of Corporations on Water Transportation, volume I, p. 44.

The Mississippi and its tributaries extend a fanlike structure of waterways from the Gulf almost to Canada on the north, to the Rockies in the northwest, and to the Appalachian hills on the east. It is to be remembered that these streams, fifty-four in all, were substantially and adequately navigable for nearly 14,000 miles for the purposes of such commerce as resulted from a half-century of rapid settlement and industrial growth in the adjacent country. There is no reason to discredit a favorable appraisal of the inland waterways in the days when the greatest American opportunity was cheap and rich valley soils and a flowing highway to tidewater—a fortuitous conjunction of natural resources which for a generation gave virility to the most potent forces of the nation's development.

The Great Lakes, distant only a short portage from the headwaters of the Mississippi and extending their looping shorelines from the center of the continent eastward to the St. Lawrence, unlike the river-ways, have continued to serve the growing needs of commerce with unbroken fidelity. The commercial importance of these inland seas in the past and present is incalculable. That their commercial potentialities surpass those of any commensurate body of water in the world cannot be reasonably disputed.

These three great natural systems of commercial intercourse must have seemed almost ideal to American explorers and early commercial enterprisers. It was the ready service of these waterways that made the industrial conquest of America so easy and so quick. The occupation of Canada must have been quite impossible without the network of lakes and streams permeating almost the entire dominion and more or less closely articulating the Great Lakes with the Atlantic and Hudson's Bay at several points. Pacific coast indentations and the 1,600 miles of navigable rivers made the industrialization of the Northwest possible, and the development of Alaska has been dependent upon river transportation.

II. It was inevitable that the development of a considerable commerce should reveal features of *inadequacy* in the natural waterways. Suggestions for the improvement of navigation facilities and for the "perfection" of the national system of waterways came at an early date. Miles Standish is said to have planned a canal from Cape Cod Bay to Buzzards Bay. It was George Washington who ordered the first survey of the Cape Cod route and thus

launched, over a century ago, the foremost waterway project of the present day—articulation by artificial waterways of the navigable indentations of the Atlantic coast to form a fairly direct and storm-free passage from Boston to Beaufort, North Carolina.² This scheme of inter-coastal improvement is now extended to contemplate an Atlantic passage to St. Johns River, and thence across the Florida peninsula to the backwaters of the Gulf. It constitutes one of the three comprehensive schemes of canal construction undertaken by way of “perfecting” the natural waterway system. Considerable public and private money has been expended on this project over a long period of time. Some work has been done on almost every segment of the project, and canals of sorts now occupy the more important reaches along the Atlantic coast, but inadequacy of depth, width, and facilities deprive them of much commercial utility.

Two other canal schemes are so plausibly logical that any intelligent schoolboy may chart their approximate routes on the map: namely: (1) an unbroken channel, or channels, connecting the Great Lakes with the ocean on the east; and (2) the creation of one or more Lakes-to-the-Gulf waterways, via canal and river, from several possible points on Lakes Erie, Michigan, and Superior. Both of these plans have actually been executed upon scales which probably seemed permanently adequate in the days of their inception.

The completion of the Erie barge canal in 1825, economically and practically considered, was doubtless the greatest single achievement in the history of American transportation. A second and less successful route from the Lakes to the Atlantic, via the Welland Canal and the St. Lawrence River, was opened by the Canadians in 1833, and lake navigation was greatly improved by enlarging the Detroit River and the construction of two channels around St. Mary's Falls between Lakes Huron and Superior. Both of the Lakes-to-the-Atlantic routes are now subject to projects of large expansion. The state of New York is just now completing improvements on its barge canal at a cost of \$101,000,000. Canada

² The Cape Cod Canal has been completed within the year at a cost of \$6,000,000. A channel 13 miles in length, 25 feet deep and 100 feet in bottom width brings Boston 66 miles nearer New York by water. Traffic around the cape is said to have averaged 25,000,000 tons and 5,000 passengers annually. Two thousand vessels and 800 lives are said to have been lost off the cape on Nantucket Shoals in 60 years.

is advancing plans for a ship canal via the St. Lawrence of such depth and security as to facilitate movements with one transshipment from lake ports to foreign markets. It is thought by some that the demonstrated superiority of either the Canadian or the New York waterway from the lakes to the sea may finally determine the commercial supremacy of the greater cities of Canada or the United States,³ and may prove equally important in relation to military and naval strategy.⁴

Four nominal water routes have been opened from the Lakes to the Gulf of Mexico. The ancient canoe route of the voyageurs from Green Bay to the Mississippi, via the Fox and the Wisconsin, is now "improved" by a canal cut through the old portage near the site of Fort Winnebago in Wisconsin. Two canals, which have rendered some commercial service, cross the state of Ohio from Toledo and Cleveland on Lake Erie to Cincinnati and Portsmouth on the Ohio River. A fourth opening to the Gulf was effected by canalization connecting and improving the Chicago and Illinois Rivers, with a branch from Hennepin near the head of the Illinois to Rock Island on the Mississippi. Chicago has recently expended \$55,000,000, the immediate consideration of which is a matter of the city's sanitation, but which contributes directly to a deep commercial waterway on the old Illinois and Mississippi route to the Gulf. The chief elements of this project are the improvement of the Mississippi River, the opening and maintenance of navigable depths in its tributaries, and the provision of terminal facilities, in all, sufficient to constitute a canal and river system, including a trunk line with properly functioning feeding and distributing branches having standardized navigable depths.

The Mississippi River highway served the commercial needs of the country in an increasing measure until about 1879. In that year one and one-fourth billion tons of freight moved by water in and out of St. Louis. Traffic on the Missouri and the upper Mississippi had then been declining for a decade. Thereafter, the lower stretches of the stream were gradually abandoned until the tonnage of the packet lines has become a negligible factor in American transportation.

After an epoch-making service in the national development

³ Quick, Herbert: *American Inland Waterways*, p. 20.

⁴ *Ibid.*, p. 26.

from 1825 to 1862, the Erie Canal lost prestige to the railways, declined rapidly from 1872 to 1877, and suddenly advanced its traffic to the high mark of seven and a quarter million tons in 1880. Since that time traffic on the Erie has declined to a half-million tons. Whether the effect of the virtual reconstruction of the canal will be the rehabilitation of its old-time relative efficiency as a shipping agency is uncertain.⁵

The shallow channels which were designed to connect, commercially, the Great Lakes and the Mississippi were delayed in their construction beyond the time of their possible usefulness. Being thus still-born in an era of railway ascendancy, they have served no higher purpose than to testify to the engineering possibilities of their construction and to exemplify the tendency to obsolescence and inadequacy of means of transportation once thought to be permanently sufficient to the needs of the country.⁶ The great river highways, with the exception of the Ohio, reached the summit of their usefulness forty years ago, and, perforce, have given way to the apparently cheaper and more efficient railway.⁷ Today scarcely a vestige of their former commercial activities remains.

III. The decline of water transportation and the supercession of the railways are due to a number of phenomena which may be designated under three rather closely related captions.

1. *Inadequacy.* Industrial and commercial development has resulted in transportation needs for which existing and potentially possible waterways afford inadequate service.

⁵ The reconstruction of the Erie Canal was undertaken in 1902 with the expectation of recovering the wheat traffic from the Lakes to tide-water. This hope has already vanished. (Hepburn, *Artificial Waterways of the World*, p. 100.)

⁶ The opinion of Dr. Moulton in *Railways vs. Waterways*, p. 465, is significant! "While canals satisfactorily served the needs of an earlier period, their day, like that of the sickle, the hand-loom, and the spinning-jenny, is now forever past. Precisely as the canal supplanted the horse in the carriage of through freight, so in turn has the railway, in the course of industrial progress, come to take the place of the canal in the field of transportation."

⁷ "River transportation is usually analogous to that by canal, for comparatively few of our streams are really natural highways of commerce. As a rule they are navigable for the purposes of modern transportation, in name only, rather than in fact. So long as the cost of canalization of a river amounts to forty, sixty, or a hundred thousand dollars a mile it belongs in the same category as a canal." *Ibid.*, p. 457.

2. *Obsolescence.* The demonstrated physical and functional superiority of railways, particularly with regard to services highly adapted to certain conditions and classes of traffic, established the reciprocal obsolescence of waterway facilities with the advance of traffic needs.

3. *Unfair competition.* Scientifically uneconomical, but effective methods resorted to by the railways to secure traffic in the handling of which they were not necessarily more efficient than the waterways previously enjoying the business, doubtless hastened the destruction of the packet lines.

These forces of inadequacy, obsolescence, and unfair competition, operating under the rather favorable dynamic environment of frontier conditions, have slowly and effectively backed the once prosperous barge and packet operators and optimistic canal promoters into the bankruptcy court and scraped their business and investments, and have concurrently established in their stead a railway system which, taken as a unit, is more extensive and elastic, and which has doubtless rendered a higher average of service at a lower average of cost.

It is significant that, in their organization and administration, the railways have entrenched themselves behind the natural monopoly of the field which they occupy in certain districts, and their technical superiority in the movement of passengers and particular types of freight; and from this position of vantage have unrelentingly refused to cooperate in a division of the traffic or other complementary service, and have persistently refused to admit the possibility of any scheme of joint operation of railways and waterways which might result in a greater efficiency than that of the railways acting alone.⁸

In order to clarify certain economic aspects of the relations between railways and waterways, and to partially establish premises upon which a public waterway policy may be defined, a brief

⁸ Seeming exceptions to this position appear in the attitude of Mr. Hill, of the Great Northern (Chicago Address, Oct. 8, 1908), and Mr. Ripley, of the Santa Fé, (*Atlantic Monthly*, Jan., 1911). They have verbally supported the deep waterway movement and rail and waterway cooperation. Mr. Hill is reported to have said on an earlier occasion, that he "could make railway rates to the Pacific Coast so low that the Panama Canal would grow up to pond lilies; and that, before the Mississippi River could compete for traffic with the railways, its sides and bottom would have to be lathed and plastered."

analysis of the above-mentioned causes of railway ascendancy is necessary.

With regard to the inadequacy of water transport, it is commonplace to observe that the wider distribution and intensification of industry, and the centralization of markets normally attending a rapid growth of population in a new country, are reflected in the volume of goods to be moved, and consequently, the primary test of the adequacy of a transportation system is its adaptability to such growing and varied demands, and this in advance of the actual development of the heavier traffic. The apparent inadequacy of the waterways to move the potential products of rapidly developing industries first invited railway construction, not as a competitive or cheaper means of transport, but as a much needed supplementary carrying device.

The degree of obsolescence inherent in means of water transportation is a matter of unfavorable comparative efficiency. When production and marketing become highly specialized, when distributing distances are great, when materials of commerce assume characteristics of complex processes of production, high specific value, and seasonal utilization, when the efficacy of working capital and availability of credit facilities demand rapidity and certainty in all the processes of production, distribution, and marketing, then, speed, safety, and regularity of transit assume relatively greater importance. In other words, service standards are determined by industrial conditions and constituted of celerity, regularity, and security; and the rate is a derivative of the service—being based either on the value of the service or the cost of the service.

Obviously, the waterways are functionally and permanently obsolescent with regard to certain kinds of traffic regardless of what rates they may offer. Having, perforce, surrendered a part of the traffic to supplementary and superior rail facilities, the law of decreasing unit costs operating in the railway business may justify carrying the remainder of the traffic by rail, as secondary traffic, on the rate principle of the *additional cost of the specific service*, thus, characterizing as obsolescent the entire waterway system as a carrying unit. Furthermore, if the decreasing unit cost, under the operation of the law of increasing returns, was justification for a total paralysis of the waterways; conversely, if a state of increasing unit costs, or the operation of the law of decreasing returns, should fall

upon the railway system, a rehabilitation of the waterways might logically be in order, as a supplementary device to relieve the over-stressed railways. There is evidence sufficient to suggest the possibility of such an eventuality.

Superior railway organization and intercorporate relations between great railway, banking, and industrial corporations constitute another element contributing to waterway obsolescence with reference to administrative efficiency, finances, and traffic development.

In the minds of friends of the waterways and many non-partisan students of American transportation, unfair competition is the chief engine of destruction which has been successfully operated by the railway corporations in reducing waterway traffic. The enumeration of certain well-known railway policies in their conduct toward waterways is sufficient to establish the premises if not the conclusion of this thesis.

The deliberate cutting of railway rates below average unit costs, and even below the operating costs of the service, upon certain classes of traffic and within certain districts subject to water competition, the deficit being made up on non-competitive traffic and in non-competitive regions, has been and still is a common practice.

The policy of railways in acquiring ownership of shore lands so located as to constitute necessary and convenient boat terminals has placed many dockage sites essential to waterway development in the control of the railways. Boat lines operating in the lake and coastal trade are now seriously hampered by this dog-in-the-manger policy of the railways.⁹

Purchase of rival canal routes and of essential segments of canal and river lines offering possible competition has enabled railways to throttle water traffic by maintaining prohibitory canal tolls and arbitrarily closing water routes. Like results are said to have been accomplished by the payment of an annual subsidy by the trans-continental railway lines to the Panama Railroad in consideration of the maintenance of a scale of rates across the isthmus on certain forms of ocean-to-ocean traffic sufficient to divert them from the coasting vessels to the all-rail haul.

⁹ Moulton, *op. cit.* pp. 82-83. Quick, *op. cit.* 109 *et seq.* Bradford, *The Annals of the American Academy*, Vol. 55, p. 240.

The studied refusal of railways to enter into traffic agreements or to cooperate in any way with independently owned water lines is the most vital and conspicuous form of unfair competition. Railway managers have been particularly careful to avoid any demonstration of the doctrine that rail and water facilities may be so correlated in their functioning as to render an improved or extended service at a decreased joint cost.¹⁰

What may properly be considered "unfair competition" is a question which might profitably receive scientific definition before final measures are taken in the formulation of waterway policy. There is reason to distinguish clearly between the attributes of private business and public business in the delimitation of *fair* and *unfair* competition. In the opinion of the writer, the application of the "additional cost" basis of rates has been and now is being carried into the field of unfair competition and was so used to divert traffic from the waterways.

IV. During the forty-year decline of boat traffic, many plans have been put forward and many arguments have been advanced looking to the construction and maintenance of an effective system of inland water highways. Domestic ocean transportation is in much the same category as canals and rivers, traffic by water between the Atlantic and Pacific coasts having declined since 1870.

Excepting the construction of the Panama Canal, the policy of waterway development cannot be said to have been seriously and systematically entered upon by the government; nevertheless, congressional appropriations for river and canal works have recognized the political, if not the economic, justification of almost every waterway project which has been advanced. The magnitude and disposition of such appropriations of public funds have long been a spectacle of national prodigality not clearly understood by those unfamiliar with political motives back of "pork barrel" legislation. Granting, for the moment, the beneficence of a policy of waterway development, there is no greater obstacle to its serious promotion than the traditional prostitution of waterway projects to the political pirates who customarily derive their sustenance from the congressional pork barrel.

Federal expenditures on river improvement since 1790 amount

¹⁰ Van Hise, *Conservation of Natural Resources*, p. 170—Commissioner of Corporations, *Op. cit.* Pt. II. p. 257.

to over \$300,000,000, composed mainly of the rapidly increased appropriations of the last twenty years.¹¹ Disregarding river improvements by the states, which have cost considerable, canal and river work in the United States has cost over \$600,000,000—more than the total cost of waterways in France and Prussia combined.¹²

Before undertaking a survey of the economic aspects of nationwide waterway improvement, a brief characterization of the more important projects which are receiving vigorous support and most of which seek public aid is in order.

1. The above-mentioned inter-coastal ship passage to extend from Boston to the Gulf of Mexico may be completed at a probable cost of \$100,000,000. Certain segments of this passage might be operated independently with reasonable chance of commercial success; however, the rapid construction of the entire project and its operation as a unit seem necessary to develop its highest efficiency as a transportation agency.¹³

2. The much discussed Lakes-to-the-Gulf waterway, via the Chicago drainage canal and the Illinois and the Mississippi rivers, if standardized at the present depth of the Chicago canal (twenty-four feet), would cost about \$200,000,000. An eight to fourteen foot depth which is favored by the engineers would cost much less.¹⁴

¹¹ Hepburn, p. 136. *Report of Chief of Engineers U. S. Army 1914*, pp. 28 *et seq.*

¹² Moulton, *op. cit.*, p. 68.

¹³ In 1913, \$500,000 was paid by the federal government for private rights in the old Delaware and Raritan Canal; furthermore, measures looking to the construction of a ship canal 31 miles in length across the state of New Jersey at a possible cost of \$15,000,000 seems fairly well advanced.

The purchase of private rights in the Delaware and Chesapeake route and the construction of a 30-foot ship canal at a cost of \$17,000,000 have been recommended by the Army engineers.

A channel connecting Chesapeake Bay and Beaufort Inlet, N. C., via Albemarle and Pamlico Sounds, 200 miles in length, would cost \$2,500,000, if 12 feet deep, and a ship canal would cost \$35,000,000. Private rights have been acquired by the government and the work is under way.

An inter-coastal waterway having a minimum depth of 6 feet now extends a distance of 300 miles along the coast of Georgia and the Carolinas, and canals of like depth reach three-fourths the distance from Jacksonville across Florida towards the Gulf.

¹⁴ In addition to the work done in Illinois, the Mississippi below the mouth of the Ohio is under improvement. \$3,750,000 is allotted for 1915. (*Report of Chief of Engineers U. S. Army, 1914*, pp. 919 *et seq.*)

3. The improvement of the Mississippi, as an operating unit, must properly include the rehabilitation of navigation on the upper Mississippi and the Missouri, in addition to the improvement of the Ohio and the lower Mississippi where considerable traffic of a distinctively local character is now moved by water. Improvements on the lower Mississippi would not involve a large initial outlay, but the annual maintenance cost would be heavy.¹⁵ To open the channel from St. Louis to Minneapolis and St. Paul, would cost twenty to fifty million dollars according to depth. To canalize the Ohio from Pittsburgh to Cairo to a depth of nine feet will cost \$60,000,000.¹⁶ A twelve foot depth on the Missouri from St. Louis to Sioux City would cost forty to fifty millions and a somewhat shallower channel to Fort Benton would add an equal amount.¹⁷

The entire Mississippi system project centering upon St. Louis, and extending its navigable trunks to Fort Benton at the head of the Missouri, to the Twin Cities near St. Anthony Falls on the upper stream, to Pittsburgh on the headwaters of the Ohio, to New Orleans at the Delta, and including a ship channel from Chicago to the Gulf, would probably involve an initial outlay of \$500,000,000. If the advice of the engineers against the construction of a ship canal be followed, and a barge-channel depth through the valley be substituted, the total cost might be as low as \$300,000,000.

¹⁵ Work necessary to be done on the lower Mississippi in the maintenance of navigation will largely depend upon what is done toward the prevention of floods and erosion on the upper reaches of that stream and its tributaries. Flood protection and the development of water power may be correlated with the improvement of navigation and, to a considerable degree, the necessary cost of either may be made a joint expense.

¹⁶ Over \$6,000,000 has recently been expended in the improvement of the upper Mississippi; \$1,200,000 is allotted from the federal appropriation for 1915.

The canalization of the Ohio from Pittsburgh to its mouth was approved by Congress in 1911 and the work is well advanced. The Ohio is the one river which has shown an appreciable increase in traffic during recent years, due to its unique location with relation to the coal fields.

¹⁷ The engineering problem of reclaiming the Missouri is said to be the most difficult of the entire inland waterway project. A considerable period and high cost of maintenance for a number of years would be required to confine the stream to a permanent channel. The relative usefulness of the Missouri would seem to be commensurate with the higher costs of improvement. For many years during the height of river navigation, the Missouri carried more traffic at St. Louis than moved on the Mississippi both ways from that port.

The engineering problems involved are not particularly difficult, but the maintenance costs during the earlier years, especially on the Missouri, would be large.

4. Although the state of New York has about completed the main work, in the reconstruction of the Erie Canal, and despite the existence of a ship channel of sorts through Canada, via the Welland Canal and the St. Lawrence River, the provision of adequate navigation facilities between the Great Lakes and the Atlantic has not yet matured from project to realization. The terminal facilities and operating efficacy of the New York canal are still largely in *prospect*. In electing to reconstruct the barge canal rather than venture the opening of a ship channel from the Hudson to the Lakes, New York left Canada without competition in the promotion of a ship channel from the Lakes to the Atlantic. Canada has in prospect the improvement of the St. Lawrence route to provide a safe and convenient ship channel to a depth of twenty-five feet. Canada seems also seriously to have undertaken to open an easy passage from Georgian Bay, via French River and Lake Nippissing, to Ottawa, on the Ottawa River, and thence to Montreal, Quebec, and the Atlantic. Canada has also cut the narrow ridge dividing Lake Huron and Lake Ontario, thus creating a direct east and west passage from Lake Superior points to the St. Lawrence and almost a great-circle water route through Canada from Lake Superior and Lake Michigan ports to the markets of Europe.¹⁸

The foregoing characterization of the rise and decline of the waterways and of measures in project for their rehabilitation is probably trite to many readers. However, the iteration is hazarded as a basis of reasoning, which must be more or less *a priori*, as to the potential commercial and social functions of waterways if projects for their development are consummated. The rôle which waterways once played in the business affairs of the nation is, in this connection, of no great significance; but the motive forces which have placed railways in the ascendancy and effected the commercial evacuation of the waterways are matters of interest, particularly as to the likelihood of their perpetuity. In other words, we may wisely inquire whether the facts of inadequacy and obsolescence of water transport and the converse qualities of

¹⁸ Quick, *op. cit.*, Notes c and d, p. 216.

elasticity and efficiency of railway service are technically inherent and continuing, or whether economic development and industrial maturity may make way for a renewed functioning of waterways, either independently of or in physical coöperation with railways.

Summarizing the discussion to this point, we have indicated the very superior natural facilities of North America for coastal and interior water transport, and the adequacy of such waterways, with the aid of inexpensive additions and improvements, to facilitate primitive industry and trade and thereafter to attract a constantly increasing tonnage for many years in active competition with railways. The direct causes of the decline of water-borne traffic are found to reside in facts of industrial evolution and railway development which clearly indicate the physical and functional shortcomings of a system of inland water transportation when operated as an independent transportation unit. Finally, an examination of the more comprehensive projects for the improvement of navigation along lines designed to free the waterways of the commercial palsy of inadequacy and obsolescence justifies the conclusion that the development and maintenance of navigable waterways are physically possible at a relatively low initial cost (less than \$1,000,000,000) in comparison with the amount said to be required by the railways (five to ten billion dollars) for necessary extensions and betterments within the next decade.¹⁹

V. It remains to consider the possible benefits of a thoroughly developed and properly organized system of inland water carriers, and, in so doing, to keep in mind the essential dynamic motive of industrial evolution; namely, that the population of this country is growing at the rate of two per cent a year and that the concurrent growth of the social demand for facilities of commerce is three to five times as rapid.²⁰ It may also be emphasized that under possible

¹⁹ Hill, New York Address, Dec. 19, 1912. *Railway Business Association Bulletin*, Feb. 23, 1912.

²⁰ "In the ten years between 1895 and 1905, the railroad mileage of the country had increased but 21 per cent, while the passenger business had grown 95 per cent and the freight business 118 per cent. By the decade ending in 1907 the increase of mileage as compared with 1897 had crept up to 24.7 per cent; but in the same time the increase in passenger business had leaped to 126.1 per cent, and that of freight traffic to 148.7 per cent." (Hill. Chicago Address, 1908.)

conditions waterway development need not be a hostile demonstration toward railways as a whole, but may be so timed and so directed as to afford a complementary transportation service and, in the long run, prove a boon rather than an injury to private interests involved in the railroad business.

The two doctrines most vigorously advocated by partisans of waterway propaganda are quite fallacious, and so obviously so that their proclamation is doing more to impede the progress of a scientific waterway policy than to advance it. I refer (1) to the argument that the maintenance of navigable waterways, even though they carry no traffic, is a justifiable and expeditious means of "regulating" railway rates; and (2) to the unsupported assertion that waterway development would make transportation so easy and so cheap as to materially reduce the present cost of living and stimulate industry by decreasing the cost of materials.

In support of the claim of regulative benefits of water competition upon railway rates, attention is customarily directed to low rates in the South resulting from the existence of used and unused water routes. It is true that through-rates and some local rates are very low in the South under the operation of the basing point system which is an outgrowth of water competition. It is also true that the deficits in service costs in this cheap traffic are made up by excessive railway charges in other districts and serious regional discrimination results. It may confidently be asserted that the least reasonable and satisfactory rate systems and the greatest obstacles to scientific rate control exist in districts where actual or potential water competition has been a factor in railway rate making.

If the conditions of water competition could be made universal, some semblance of logic might support the doctrine of automatic rate control by rail and water competition; but to develop waterways, considering their necessary geographical limitations, in the expectation of lowering rail rates by competition, or even with the intention of permitting unrestrained competition between rail and water carriers, would be industrially and commercially destructive. Adequacy of the transportation system, the quality of the service, and non-discriminatory charges are of much greater economic import than the gross amount of the rates. Furthermore, the idle investment of a billion dollars in order to reduce the earnings of an active investment of \$20,000,000,000, in these days of cost ac-

counting and scientific methods of service standardization, approximates mental simplicity—a procedure somewhat analogous to the purchase of a dog to chase one's own chickens out of one's garden—a policy rather destructive to all useful elements concerned, as well as expensive. The reasoning might be different in case the provender seeking fowls belong to a neighbor and the line fence is down.

It is doubtful if any contemplated scheme of transportation development, other than better wagon roads, can materially reduce transportation costs. A reasonable defense of any project resides in its probable effectiveness in providing and maintaining adequate service, a requirement which the railways are not always able to meet, and in maintaining rates at something near the present level, with a minimum of uneconomic discrimination.

The admirable study of Dr. H. G. Moulton²¹ leaves no room for intelligent controversy as to the relative unit costs of rail and inland water transportation. The foundation of the popular fallacy of cheap rates by water resides in the fact that some few natural waterways are readily navigable without any considerable expense for improvements, and in such cases fixed costs may be so inconspicuous as to make transportation rates on such traffic as is adapted to the service very low. This is true of lake and ocean transportation on long hauls, and of a very few river and canal routes. Again, a desultory, irregular, and unorganized water service may be afforded at times and places and to certain commodities at rates lower than rail costs. But when sufficient capital is invested to insure reasonably adequate and regular service by river or canal, the experience of the world fails absolutely to support the claim of lower costs of water transportation *if interest on capital invested is included in the cost of the service to be covered by operating revenues.*

Excepting in the Netherlands, the canal and river systems of Europe are considered successful when the earnings are sufficient to compensate operating costs with a possible slight contribution to maintenance. Ordinarily, there is no return at all to the public capital expended in development and maintenance.

In France and Germany, both privately and government owned railways are operated at a profit, allowance being made for interest. The waterways are constructed at public expense and largely main-

²¹ Moulton, *op. cit.* p. 455 *et seq.*

tained by taxation. Water rates on certain traffic are attractively lower than rail rates, and in some instances traffic is driven from rail to water routes by legally enforced prohibitive rail rates. In this situation, Dr. Moulton sees only poor economics and mistaken public policy and advocates the evacuation of the waterways. In the opinion of the writer, there is reason to doubt the validity of this conclusion. But Moulton has established beyond peradventure that there is little probability of lower average transportation costs as a result of improved water transportation.

VI. Disregarding the probability or improbability of lower rates, there is evidence of possible beneficence of a progressive waterway policy in the United States, and such evidence bears promise of increasing weight with the flight of time.

First. There are indications of the approaching maturity and inelasticity of the railway system and its consequent failure to meet future demands of commerce unless relieved or deprived of certain classes of traffic which are absorbing a rapidly increasing amount of operating capacity.

Second. Public outlays for permanent improvements are not properly to be considered as being in the same category with private investments, particularly, with respect to expected dividends and the inclusion of *interest* as a cost factor in the calculation of rates to be charged for public services. This being granted, waterway development may be justified in spite of the improbability of commercial revenues sufficient to cover *costs*, including interest.

Third. Sound public policy in flood prevention and water power development may dictate such measures as will make navigation a coördinate, or possibly secondary, object of stream control; thus materially reducing the capital costs of development and maintenance chargeable to any one purpose.

During the autumn and winter of 1906 and 1907, there occurred an unprecedented congestion of railway traffic in the United States which, although partially due to poor operating management, was indicative of possible physical traffic limitations of the railway organism. There have been recurrences of traffic congestion less severe than that of 1907, but of sufficient frequency and magnitude to hamper commerce and to cause considerable anxiety among thoughtful railway managers as to the future performance of the railway system. Traffic congestion does not mean merely an ex-

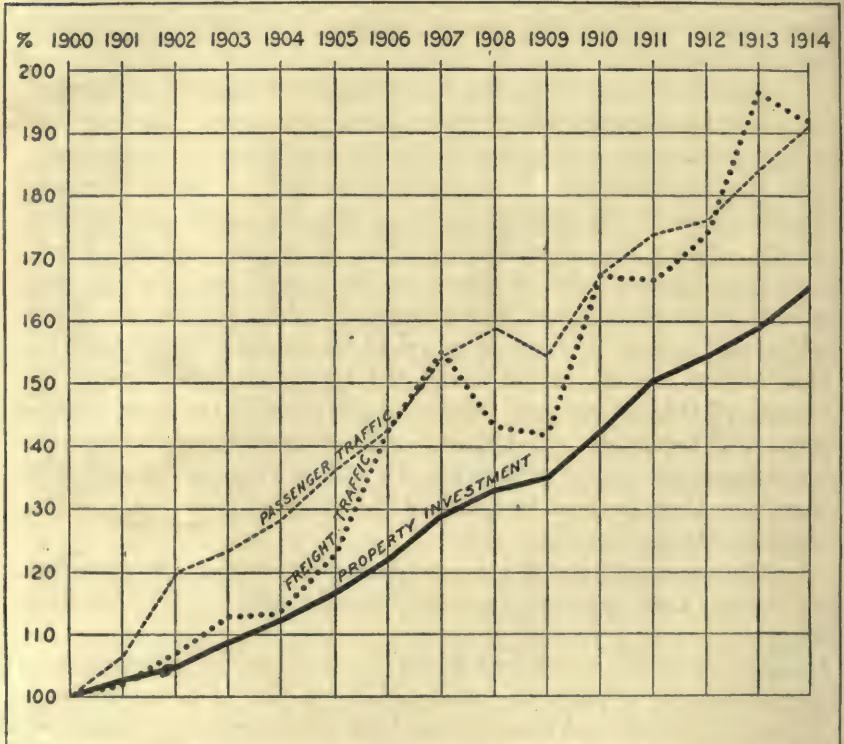
cess of freight above the maximum capacity of the roads, but also a partial paralysis of the entire system and a general reduction of efficiency in handling business. No one cause is sufficiently conspicuous to suggest an effective remedy by reinforcement or improvement of the existing system. At times, car shortage is the predominating symptom, at other times it is motive power that is inadequate, and most frequently, perhaps, terminals and transfers are jammed.

Measures have been taken to bring the existing railway system to its highest efficiency by strengthening the weaker parts of the organism and by developing a highly coördinated management. But such measures are of temporary relief only. Careful observation leads inevitably to the conclusion that the railway mechanism of the country has reached that point in its development where increased capacity and efficiency can be secured only by physical additions amounting to "reduplication"—the construction of an additional operating unit of physical dimensions comparable to that of the present. This would not mean any considerable extension of the railway net, but the duplication of trackage, equipment, and terminals. To this end, railway financiers are endeavoring to raise new capital at the rate of a billion a year and are frankly justifying their purpose by proof of the physical inadequacy of the existing railway establishment.

The strongest proof of this condition of the railways is evidenced by the fact that, in recent years, additional traffic has been handled at an increasing unit cost of service, and the relative increase extends to every important cost factor, *i.e.*, investment, maintenance, and operation. This is the most significant fact of recent railroad history. The railroad business has been considered one of decreasing unit costs, and competitive and developmental rates have customarily been made very low upon the theory of lower costs of additional service. Traffic and revenue statistics submitted by the thirty-five railway systems of the East and Northeast, and substantiated by the investigations of the Interstate Commerce Commission, in the so-called Five Per Cent Rate Case before the Commission in 1914, afford startling evidence of the status of the railways. The statistical charts reproduced in the notes below clearly indicate that the railway establishment of the most highly developed industrial district of the nation has passed the summit of efficiency,

and, since 1906, has experienced a functional decline known in economic parlance as the state of *decreasing returns*, or, conversely, *increasing costs of production*.²²

CHART G.—Comparison of increases in property investment and traffic, 1900 to 1914, inclusive, for all 35 systems.

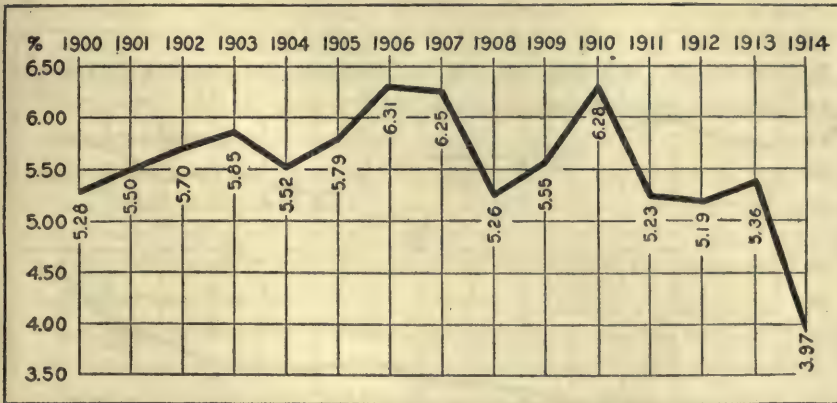


²² Charts G and H indicate an increasing proportion of traffic growth to investment growth from 1900 to 1907, and, thereafter, a notable decrease in additional traffic and income relative to concurrent investment which is most apparent during 1914.

Chart N effectively illustrates the relative increase of the several items of operating and maintenance expense in contrast with concurrent revenues.

Although correction should be made for increased cost of labor and materials, and possibly for taxes, before such statistics are accepted as evidence of the operation of the *law of decreasing productivity*, the correction is not sufficient to materially modify the character of the revenue and expense ratios, or to invalidate the implications of the chart.

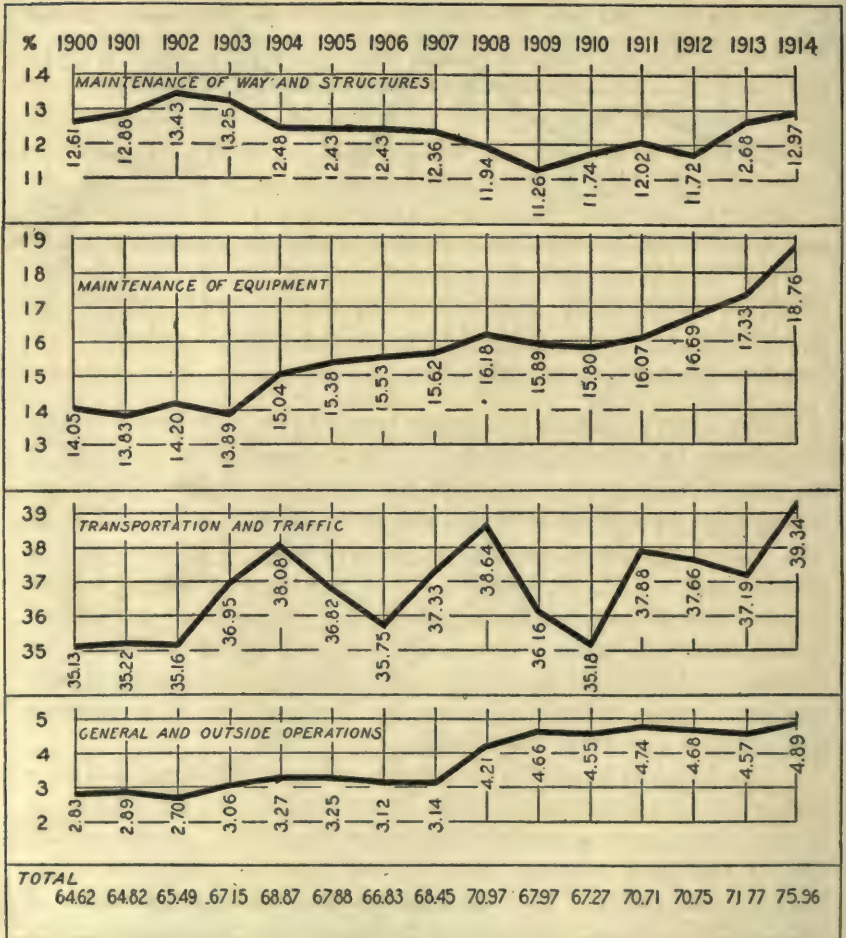
CHART H.—Ratio of net operating income to property investment for all 35 systems.



The almost obvious conclusion seems to be that either of two things may be done to provide for the transportation demands of the future. (1) An approximate reduplication of the railway establishment may be undertaken at a probable cost of \$20,000,000,-000. (2) A system of interior waterways may be developed at a possible cost of \$1,000,000,000. Such a waterway would relieve the railways for an indefinite period of a considerable portion of certain classes of bulky traffic which are the primary factors in car shortage and terminal congestion, and would leave the present railway mechanism entirely adequate for the handling of passengers and medium and high class freight.

The physical feasibility of railway enlargement is not a simple matter. Multiplication of tracks is relatively easy, and the same is true of equipment, provided funds are available; but the expansion of terminals presents physical and financial problems which are truly staggering. The terminal problem presents the choice of abandoning terminal properties in the larger cities for more spacious locations or the forcible expansion of city terminals by the clearing of intensively occupied areas of urban land. Electric equipment and underground and overhead passage afford a tremendously costly and, at best, temporary palliative.

Low class freight which may be afforded a reasonable service by water carriage should not longer be permitted to absorb the capacity of railway facilities which are dangerously threatened with

CHART N.—*Ratios of groups of operating expenses to operating revenues for all 36 systems.*

Above charts are reproduced from the findings of the Interstate Commerce Commission *in re* Investigation and Suspension Docket, No. 333, Rate Increases in Official Classification Territory, Dec. 16, 1914.

inadequacy. Fuel, building materials, and some farm crops are admirably adapted to water transport. The annual growth of such traffic is large. It insures a ready demand for water transport and may be desirably eliminated from long-haul rail service.

The development of waterways as a secondary means of transport seems entirely logical. Rivers and canals would cease to be actual or potential competitors of the railways, but would be coordinated with them to form one organic economic unit, the same coöperative devices being used to coördinate rail and water transportation as are now in effect among rail carriers. Adequacy of service and the approximate maintenance of the existing level of transportation rates would be the result, rather than lower rates as prophesied by some visionaries, or the unavoidably higher rates which are rapidly becoming necessary to sustain the higher costs of railway operation.

If, as some contend, railways may be provided to handle all the traffic of the future at rates commensurate with those of the present, the only justification of waterways must be a lower cost for water transport. If this position is correct, the canal and river systems of Europe, rather than being an asset as is generally supposed, are a social impediment, parasitic upon industry and representing a loss of capital equal to all outlays for construction and maintenance plus compound interest on the amount and augmented by a considerable waste during each additional year of operation. But a correct principle of cost determination, as applied to rail and water services, with a proper regard for the respective public and private interests concerned, may give the matter another color.

Transportation is a quasi-public business, with increasing emphasis on the *public* element of the hyphenated adjective. The quality of the service is distinctively a matter of the public interest to be officially determined. The cost of the service is a matter, primarily, of private interest properly to be reflected in rates sufficient to constitute just compensation for capital and labor utilized in creating the service required. The mere magnitude of a business may become so great as to establish a public interest, in addition to service requirements, in such features, for example, as the incidence of the rates and the source and methods of accumulation of capital.

Railway capital is already so great as to absorb a large measure of the total social wealth. The imminent enlargement of the railway plant, in the absence of waterway facilities, will doubtless involve the fixed investment of one-fifth to one-fourth of the nation's capital resources. The segregation of so much capital in any one public service industry of unified management is cause for the exer-

cise of a public interest in the capitalistic features of the transportation business. Now, the railway companies may or may not be able to secure the requisite amount of new capital. In the latter instance, the whole transportation establishment is headed toward government ownership—for government can always raise *funds*. But granting that additional capital may be had, interest charges will become higher on all capital when the new securities are placed. The higher rates will be necessary to attract new capital to the railways, to divert old capital from other enterprises, and to induce saving and investment by persons not sufficiently thrifty to acquire capital at the premium afforded by existing rates of interest.

It is well understood that government can raise capital much easier and cheaper than can the most favorably considered private corporation. Government can borrow at rates one-fourth to one-third lower than can railway companies. Furthermore, funds realized from the sale of government bonds are not withdrawn from industry nor were they, as a rule, available for industrial investment. Government may raise funds by taxation without creating any obligation beyond the employment of such funds in promoting the general welfare. In this it is interesting to observe that the collection of a tax may actually create capital and induce enduring thrift when the interest premium on saving may do neither. It is indeed probable that the large proportion of the total public revenues, approximating \$3,000,000,000 annually, represents private savings which would have been thoughtlessly spent for non-essentials in the absence of tax requirements. There is little doubt that the sinking-fund tax levied to retire the Civil War bonds resulted in a net addition to the nation's wealth to the amount of the bonds and interest. The French learned to save while being taxed to pay the German indemnity of 1870 and have been saving ever since. Given a certain standard of well-being, a people may actually be taxed rich, provided public funds thus accumulated are properly disposed—like life-insurance, which involves the identical principle, the benefit may go to the next generation.

We are forced to the conclusion that, if the capital necessary for the absolute requirements of railway enlargement is raised by the ordinary methods of private finance, there will be created a shortage of funds in other businesses, an increased interest rate on capital, and consequent depreciation of all outstanding securities,

and, finally, railway services will be produced at a higher cost and sold to the public at higher rates.

An equal capital could be raised by government without financial proselytism, without disturbing the normal distribution of new capital, without materially advancing the interest rate or disturbing security values, and probably in such a way as to materially increase the private and social wealth of the country. But the investment of public capital raised by bond issue or taxation in railway construction would be a long step toward government ownership, indeed, this fact is the strongest argument in favor of government ownership. In the absence of a desire to accomplish public ownership of railways, it seems the part of wisdom to stabilize and secure private interests as they now are and to utilize the superior financial facilities of the government to supplement the existing rail mechanism of transportation with government-owned waterways subject to regulated use by privately owned boat lines.

The *reasonableness* of water rates may be judged on an entirely different basis than that of rail rates. In the latter instance, private capital requires remuneration on a scale necessary to induce saving and investment as against the ever-present alternative of pleasure-spending. Public capital may be sufficiently compensated in the promotion of economic opportunity or other attributes of general welfare resulting from its employment, regardless of any immediate or direct value return. The primary *interest motive*—the personal reward of saving—is largely absent in matters of public investment; and waterway rates may properly neglect the interest factor in the determination of the cost of the service.

VII. The improvement of navigation as a logical concomitant, or even as a by-product, of power development and flood control is not so remote or inconsequential as may at first appear. The expenditure of large sums in flood prevention on streams of actual or potential navigability is imminent and imperative. Hydro-electric development on a grand scale is a certainty of the next decade or two. The result of both will be a marked improvement in the regimen of many streams subject to navigation. Power development, together with navigation facilities, will tend to a decentralization of industry and population and a redistribution in harmony with economic opportunity as determined by the natural location of the resources and agencies of production.

Railway enlargement means the aggravation and intensification of the social and economic diseases of concentration. Unless new routes and terminals are established, which is improbable, population will continue to concentrate at existing terminals and industrial points along the railway lines. The very nature of railway service and railway rates exerts a constant pressure cityward. Social hygiene may be "far fetched," in the minds of some, when admitted to a discussion of industrial development. To some of the others of us, it is preëminently relevant.

Finally, if there still be reason for doubt as to the financial feasibility of waterway development, let us consider that the customary "pork barrel" appropriations of Congress amount to not less than five per cent annual interest on \$500,000,000. The rivers and harbors pork barrel will never be destroyed until the excuse for its existance is disposed of. The application of one-half of that \$500,000,000, together with an equal amount to be supplied by the willing localities of the Mississippi Valley, to perfect in detail the Mississippi, Missouri, and Ohio Rivers projects, and the Lakes-to-the-Gulf canal project, would be a beneficent measure, even if the resulting waterways should prove financially unprofitable as means of transportation.

THE RECONSTRUCTED CITY

BY J. RUSSELL SMITH, PH.D.,

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When an architect builds a factory, he lays down upon the table before him a list of the various things the factory is to do, and then proceeds from these known needs to create a structure which will best meet them. It seems peculiar that, despite our thousands of years of experience with cities, there has been so little attempt to apply large scale planning to the idea of the city as a functioning unit and lay it out accordingly. Is it any more desirable that a city should grow indefinitely large than that a man should grow indefinitely large? Perhaps most of us as little boys have wished the wish of fairies that we might be as big as a giant so that we might pick up certain undesirable persons and put them between our fingers and place them where they belonged. Is the world-wide desire of cities to grow big, big, big, any more sane? My answer is emphatically "no." A city is to perform certain functions, and when it is big enough to perform those, additional size is of no more value than an additional one hundred pounds is to a man who already weighs one hundred and eighty.

The World's Greatest Town Planner.

Mr. Ebenezer Howard, an Englishman, sat down and drew up the plans of an ideal city. He first analyzed the proposition. The city affords to its inhabitants the social opportunity of numbers, to the factory the labor market of numbers, but it tends inevitably to crowd. On the other hand, the advantages of the country are cheap sites and room to grow things in the yard and garden, room to play, fresh air, and nearness to food supplies, but lack of social and employment opportunity. Then having put these things down on the table, he proceeded to plan a city which swung around the cardinal principles of (1) having all the inhabitants so placed that they were so near their factories that they could walk to their jobs, (2) so near to open space that they could easily walk to the farms, fields, and playgrounds, yet (3) sufficiently numerous to make the labor supply for factories which pro-

duce. This after all is the object of the city. These ends can only be attained by having a definite size for the city. This means limitation of the population. Why have more if the city is big enough. His ideal plan of the city was circular with an open park in the center, around which were gathered the public buildings of which the city needed but one, or at most but few, such as the town library, town hall, theatre, opera house, museums, etc. Then came some four or five circular streets of residence, with a wide avenue in the middle of them with a park space in the middle of it, with room for schoolhouses, churches, masonic buildings, and other semi-public structures. The last street was to be a row of factories with a belt line railroad behind them and beyond that open ground for garden plots and farm land.

Nothing New About It

By the application of our well-established principles of building restrictions, crowding was kept out by limiting the size of lots to a certain minimum and then limiting the proportions of a lot that could be covered by a house. Thus Mr. Howard figured that the city would be full grown with about thirty-two thousand, more or less, depending upon the size of the families. After this city was full the other increased residence needs could be met by building another city nearby, just as we build the next suburban station on the railroad. In the ideal plan about six thousand acres are required for the city, of which about half are left for farms, and the remaining in streets and city.

How It Works

The average American predicts failure for any such enterprise. However, England feels the city problem much more keenly than we do in this country, for it has had the industrial city longer, and in recruiting for armies, particularly for the Boer War, England has discovered with horror the physical degeneration which results with generations of city dwellers, with inadequate dwelling facilities, no gardens, no ground, no play facilities. After much hard work, Mr. Howard succeeded in forming a Garden City Association that raised enough subscriptions of cash to start, although they did not get the necessary one and one-half million dollars which they thought they should have. They bought about four thousand acres

of farm land forty miles north of London in Hertfordshire on one of the great railroads and proceeded to set apart the central half of it for city, lay out streets and plan a factory town. Owing to the contour of the ground, there was no attempt to maintain the circular idea of the abstract plan, but all the principles were applied, namely, nearness of the man to his job, to the open country, to play space, and a roomy lot for each residence. It has succeeded. In nine years between 1904 and 1913 about thirty factories have moved to the place, which had a population of 8,000 and was steadily increasing. The crucial test, however, of its success is the balance sheet. It was financed by a group of individuals who were willing to put up some money, buy the land, and get their 5 per cent cumulative dividends eventually if it succeeded. It followed the usual English plan of giving long leases to land and letting tenants improve. This is the way many English cities are already built. The company bought at farm values and rented at low town values. Thus the cottager who buys a lease for a plot pays perhaps \$10 a year for the lot, but as there are seven or eight such lots per acre, the income on the original purchase price of \$200 is ample. Thus these leases which had been sold when the town was one-quarter grown caused the balance sheet for the year 1912 to show a profit. The financial plan provides that the promoters shall get 5 per cent, and after that further profits shall go to the city in improvements and reduction of taxes. One of the manufacturers told me he could foresee the time when the town would be without taxes, and then the manufacturers would come there "in droves."

Its Appeal to the Manufacturer

I regard this attempt to eliminate the crowding evil from the manufacturing town as perhaps the most important single social experiment going on in Europe, for it is a statistical fact that no large city population anywhere is physically and numerically maintaining itself. In 1913, I spent several days in this city going through it very carefully to see how it appealed to the manufacturers. I had letters of introduction to the prophets of the place, but really I did not care how it appealed to the prophets, for I knew that in advance. I did not care how it appealed to the poets, the artists, the retired bankers, the maiden ladies living on snug incomes, nor the cranks, nor the merchants who sold to all these,

nor even to the workers who made up the bulk of the population. The worker goes where there are jobs. The butcher, the baker, and the candle-stick maker come to serve him, so that the vital part of a city is the way it appeals to the man who promotes the primal industry, which is usually manufacturing. Therefore I interviewed the manufacturers of the place, making a special attempt to try to find those who were most distinctly what you would call the practical turn of mind in contrast to the altruistic. Everywhere I found the same enthusiasm. I went to get their ideas, but first I must go and look at their plants. They all pointed out the great superiority of the plant on these two- or three-acre cheap sites over the plants they had left in London, many of which were crowded, and so dark as to be lighted by gas, and so inadequate as to interfere with the best efficiency of work.

Perhaps the best interview was given by an automobile manufacturer who had been the hardest to persuade to come there, and who finally consented to do so for the following reasons as he stated them:

First. When a man bangs about in an omnibus for an hour and even more, morning and evening, going to and from work, as my men did, I figured it was wearing him out, and making him less efficient for his work. I also figured that the six-pence he had to pay for that finally came out of me.

Second. In London where there were lots of works, we found the men were becoming rovers, increasingly so. If a man did not like it in my works, he could move to the next. When he needed a little discipline, he would get mad and quit, and go to the next place where he would do the same thing and be none the better for the move. It cost us at least two pounds Sterling when a man quit. Now where there are less works of a kind up here, a man will listen to reason, is a little more dependent on his job, learns, and becomes a better worker.

Third. The building restrictions appeal to me. In London, if I wanted to put a stove pipe through a foundry shed roof, I had to draw up plans and specifications, apply to the board of building inspectors, pay a fee, and maybe wait thirty days for them to get around to it, and perhaps be refused. Here, if I want to do it, I go ahead and stick her out. My plant is so far from the next plant that it can catch fire and burn down if it wants to without much danger to others. In London a rubber plant came and stood alongside mine, and the underwriters put my insurance up 100 per cent. Here that cannot happen. I have signed a uniform contract with the company like every other manufacturer has, and I know just what they can do and what I can do.

I found out one thing that I never believed. I had heard, of course, lots of socialists and other people say that if a man had a nice new factory with plenty of light and air, and good recreation, he worked better, but, Lord, Mr. Smith, I never believed it. But it's a fact. I know, for I have brought men here from

London, have brought the machines with them and the same men worked on the same machines at the same rate of pay with the same inspection and same bonus system, the same number of hours per week, making exactly the same brand of machine, and they turned out more work. It amounts to between 7 per cent and 8 per cent. That cuts down overhead charge, and what's more, the quality of the output is better. I can't give you that in percentage, but I have been running these works for fifteen years and I know. The stuff goes through better, and less material is spoiled.

When the work is over, the children come up to the factory gates to meet their fathers and they are home in ten minutes. You ought to see this place on Saturday afternoons. It is full of football games. Every works has a football team or two or sometimes three. All the teams play match games with each other in winter and cricket games in the summer.

It is not an uncommon thing to see a factory in the corner of a three-acre lot over which it may eventually grow. Meanwhile football goal posts indicate the use the ground is being put to. Owing to the fact that this land is had at a low lease per year, the works can easily afford to rent three acres of ground to expand on.

It is the most beautiful factory town I have ever seen, for the reason that every house has room enough for flowers in front and vegetables behind. At no place do they have lots more than twelve to the acre, which means that lots can be practically 20 x 200 feet, even in sections given over to the artisan. That makes provision for a small front yard, cottage site, little back yard, and 100 feet left for garden in the rear. A labor agitator with whom I had a long interview on Sunday told me he could pretty nearly tell how long a man had been there by looking at his garden. The first year after arriving from London, he did not do much. Then summer came, the neighbors began to hand vegetables across the line. The next year he made a start, and by the third year his garden began to be of some real value.

Inasmuch as the town is definitely planned, it has ample factory districts on railroad sidings, and there is on each side of this a large district given over to cottages for factory workers. This is reserved for factory workers, by building restrictions which insist that houses shall cost up to a certain minimum, but not beyond a certain maximum. That practically means artisans' cottages. Beyond that in both directions are larger lots, at higher rent with different building restrictions, which means middle class. On the highest ground still further away from the factories are yet larger and more expensive lots where factory owners and persons of some means

have their beautiful homes. Near the station is the natural place for the shopping district, while immediately across from it is a seventy-acre playground, with several smaller ones of twelve, five, three, and one-half acres, etc., scattered about the place, which is, so far as I know, the only town of its size in the world that has public provision for simultaneous play of any large percentage of its population.

The limitation of population is provided for in building restrictions. By this means these facilities of accessibility and play space become permanent. Just beyond the factory district come the farm holdings. Perhaps Mr. Howard's dream of a town that combines the advantages of both city and country will come true. It has certainly made a good start.

The people of this town have almost unique opportunities for the development of health, muscle, character, and wealth through by-industry. There is a very considerable chance to duplicate the conditions of the artisan's life before the factories came. Think of the opportunities for boys and girls to garden, especially as the time for beginning factory labor is being postponed. This opportunity for wealth and solace and the additional ones offered by poultry are a boon to the old, and they are being used in Garden City. Back of a beautifully embowered yard lived a retired engine driver. Back of his cottage was one of the most productive bits of garden, 50 x 40 feet, that I have ever seen. If a family wishes to go at market gardening on the side, small holdings can be rented just beyond the town limit. It is not necessary to pay city lot rent. The land is not suburban, it is farm land, so denominated in the contract, and the contract is as tight as it could be made.

The health of the community as indicated by the appearance of the school children, and by vital statistics is unusually good.

The Needless Reconstruction of Indefinitely Planned Cities

The fact that this garden city is definitely planned saves it from the endless turmoil of reconstruction which a growing city encounters, owing to the fact that as the city grows, each part has a different use with every generation. Therefore each generation tears down what the previous generation built to last for many decades. Thus in Philadelphia and in New York the business

section is invading the residence section, either using awkward old residences, or tearing down and building anew. This winter a block of splendid substantial houses worth many thousand dollars was torn away near the University of Pennsylvania to make room for another university building. That great university with 5,000 students on the campus has outdoor space for one football or baseball game at a time, leaving the other $99\frac{3}{5}$ per cent without the possibilities of outdoor athletics at that time. Thus the city has swamped itself, and its institutions, as all growing cities do where every building operation and every unit of growth is part of the heterogeneous individual effort. The supreme example of this waste is perhaps shown by the subway, that fearfully expensive kind of construction that never should have been. The suburbs of a growing city are successively swamped by new uses. Because the people are expecting in a short time to sell them for building purposes, the land is held for high prices and the chief occupation of the land that should be in crops is the support of "for sale" signs. Around Garden City is a belt of farms and playgrounds, which, owing to the fact that it is definitely set apart for these uses, has and can have no sale value, in which respects it resembles our parks.

The most significant part of the whole thing is that it has been done by the application of existing practices and existing laws with existing human science. Most attempts at social reconstruction have to await a conversion of the majority to a new point of view, and if the dreams of the socialist come true, we must also develop an entirely new system and type of business administration. In contrast to that millennial process, a garden city like Letchworth, England, can be built now in any well-chosen location. Any group of capitalists with constructive imagination and good business ability can start in and do it under existing law. As to its areal aspects—there is plenty of room along the Delaware River for all the industrial population now near it (and much more) to be so situated that they could avail themselves of all the principles involved in Garden City and have the best access to the harbor. They now have very poor access to it.

If our urban people lived in such cities as Garden City it would beyond a doubt reduce the cost of living, increase wealth through by-industry, increase pleasure through the possibilities of recreation,

increase efficiency through increased health. The land speculator alone would lose—lose his present much too widespread opportunity to take something and give nothing in return. Something for nothing is a process that is variously regarded according to our social enlightenment.

THE ATTITUDE OF BUSINESS TOWARDS FOREIGN TRADE

BY EDWARD EWING PRATT, PH.D.,

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The great European war will bring about not only large changes in the map of Europe but also tremendous changes in the industrial and commercial alignments of the world. The United States has been gathered up by the European explosion and projected into the world's affairs and into the world's markets in an entirely unexpected manner. The entire industrial and commercial trend of the United States has been altered. Great commercial and industrial opportunities confront us and beckon us on. It is a question, however, whether business is prepared to take advantage of these opportunities.

The American business community may be divided into two camps. One camp has for its slogan and motto the "home market." The other camp has for its slogan and motto "foreign trade." These two terms "home market" and "foreign trade" represent two highly contrasted attitudes towards the commercial and industrial future of the United States. In the "home market" group are those who, in the face of present opportunities to extend our trade into foreign markets, point out the large advantages of domestic trade and who are unable to see the advantages of developing a foreign market. In the "foreign trade" group, on the other hand, are to be found wide-awake, ambitious and imaginative business men who are looking forward to the expansion of their trade to all parts of the world.

There are in the present situation vast opportunities not only in the foreign markets but in the home market as well. The United States has been a very large importer of commodities manufactured in other countries. Since the beginning of the war the principal manufacturing countries of the world have ceased to manufacture for export to any considerable degree, and we find ourselves in urgent need of certain kinds of manufactured articles. We now find that we can no longer purchase them in sufficient quantities from

European nations. Here are many opportunities for the extension of American enterprise in the "home market," and if the great European war does nothing else than demonstrate to the American manufacturer the necessity of self-sufficiency and independence of other nations, it will have rendered the United States a service. For example, during 1914, we imported over thirty-five million dollars' worth of silk goods, over seventy million dollars' worth of cotton goods, over eighty-two million dollars' worth of manufactured fibers, and over one hundred and eighteen million dollars' worth of chemicals, drugs and other chemical compounds. The field of chemical manufacture seems to be an especially weak point in American industry, and is a field in which at present there is a vast opportunity to expand by the intelligent use of our natural resources in conjunction with the favorable opportunity afforded by the conditions in Europe.

Strange as it may seem, American manufacturers are not hastening to take advantage of these opportunities. This is especially true of those who belong to the camp which has for its slogan "home market." It seems to be a peculiar psychological trait of the "home market" man that he does not even believe in a natural, healthy extension of his cherished "home market," and even in the face of tremendous incentive to develop new lines of industry. American business men have not always been willing to face the problems which confront them and solve them on their merits or demerits. Large amounts of money and time have been spent for lobbying in attempts to obtain artificial restrictions and other legislative benefits from the federal government. This time and money could be much more profitably spent upon studies to secure more efficient methods of production and distribution. Investigations made by the federal government have disclosed a surprising lack of knowledge, in many American industries, of the exact, or even approximate, cost of production of the units of manufacture. There are enormous losses in the distribution of goods when large discounts are allowed and when cancellations are tolerated, and when goods pass through too many hands in the progress from the producer to the consumer. If more attention were given to these and similar matters, economies could often be effected which would obviate the alleged necessity for additional governmental aid.

There are some people who actually advocate the development

of the "home market" to the exclusion of all other markets. This fact alone shows the short-sightedness of the policy of the "home market" group. But there are other meanings in the term "home market." The term "home market" implies a limited outlook. It means provincialism in business; it means self-complacency; it contemplates the building of a tariff wall to keep out all invaders, even if that wall at the same time prevents the extension of our own markets abroad; it means nation-wide inefficiency because it excludes that competition with other nations which forces upon the American industry nation-wide effectiveness; it implies a certain lack of progress and stagnation; and finally, it implies small scale production in every sense of the word. The "home market" idea takes no cognizance of the fact that American manufactures are increasing vastly more rapidly than the population, and that unless greater foreign outlets are found for our products a limit will be reached sooner or later, in the development of many of our manufacturing industries.

The other group of opportunities has to do with foreign trade. It is in those foreign fields where European nations have held their sway almost undisputed by the United States, that there are to be found the largest opportunities for the extension of American commerce and industry. For a number of years the American manufacturer has neglected this fruitful field of commercial endeavor and has left it to his European competitor. Now his European competitor is otherwise engaged and he has been called upon, in many cases against his desire, to do business with foreign countries which have formerly been purchasing from the European nations which are at war.

It is not the intention of the writer to advise manufacturers and business men to give up "home markets" and to devote themselves to "foreign markets." Such advice would be absurd. The intention is to urge manufacturers to supply an even greater range of wants in the domestic market than they have ever heretofore supplied, and in addition, to urge them to recognize the opportunities in foreign markets and to go out and get the business which awaits them there. The "home market" should be expanded into the international market.

There is a considerable body of manufacturers and merchants in the United States who have adopted foreign trade as their aim in business. They are fully awake to the possibilities of the tremen-

dous foreign market and realize the advantages of it. The term "foreign trade" implies the many-sided development of industry. It means the internationalizing of our trade and the enlarging of our industrial and commercial outlook; it means the fearless competition of our manufacturers with those of other countries, not only at home but also abroad; it means the leveling of artificial barriers; it means the aggressive action on the part of our manufacturers rather than passive resistance; it means the practice of rigid economy, the complete utilization of inventions and the savings which result from capacity production; it means the creation in our industrial life of machinery for supplying, not only our own wants, but the wants of the world; but perhaps most of all it means the stabilizing of our business.

Our commercial and financial position would be greatly strengthened by a world market. England has admirably weathered the financial storm occasioned by the great European war, and it is realized that no small part of her strength is due to the fact that her markets are world-wide, and that London is to a considerable extent the financial center of the world. The financial situation at the opening of the war was most efficiently handled there, and it is only as we are able to approach the position now held by England that we shall be able to stabilize our commercial and financial conditions.

The situation facing the American business man today is a serious one. The question before him is whether he shall turn his face toward foreign lands from which the war has compelled his competitors to withdraw, or whether he himself shall withdraw into his "home market" and erect about himself an impassable barrier which will not only prevent foreign products from coming into the United States, but will also serve to prevent the products of the United States from going freely into the markets of the world. The important problems which confront the American business man and which he must decide on evidence which he considers pertinent are three:

- (1) Are conditions in the world markets such as to warrant his invasion of them?
- (2) Are the bankers of the United States prepared to finance the extension of his foreign trade?
- (3) Can he, after the war is concluded, hold the markets which he has succeeded in acquiring while his competitors have been otherwise engaged?

In seeking for the answers to these inquiries, the present and past conditions which bear upon their determination must be carefully analyzed.

(1) *Are conditions in the world markets such as to warrant the American business man's invasion of them?*

Is it true that financial and business conditions in foreign countries are so bad as to make it impracticable for our manufacturers to market their products abroad? Those who hold the affirmative opinion point to South America. The countries to the south of us, they say, are almost bankrupt, the war has ruined their trade, they are unable to sell their products, they have no money and no credit and they cannot buy our goods.

Let us briefly inquire into the situation of these South American countries. They are each of them producers of raw materials. Argentina produces wheat, corn, linseed, meat, hides and wool; Uruguay produces wool; Chile produces copper and nitrate; Brazil produces coffee and rubber; Peru produces sugar and cotton; Bolivia produces tin; Colombia and Venezuela produce beef and tagua nuts, etc. These products formerly found markets in both the United States and Europe. Suddenly, on the first of August last, the European markets almost ceased to exist, and the prices of raw materials produced in Latin America fell as sharply as the price of cotton in this country. But conditions are changing. The countries which are most closely related to us, Colombia, Venezuela, Ecuador and the countries of Central America, are recovering and are now fairly prosperous. Argentina and Uruguay are fast approaching the normal. Bolivia and Peru have just started on the upgrade, and Brazil and Chile alone of the countries of Latin America (except Mexico) have been unable to do more than begin their recovery.

But after all, the present economic condition of the countries to the south of us is not as important as the application of common sense on the part of the American manufacturer in his attitude toward this foreign trade. While the present time is opportune for opening up new markets in South America, the time is not yet ripe for the immediate selling of goods. The first and necessary step is to send salesmen or, better, business diplomats into South America to study the markets, to learn the country, to meet the people, to

become acquainted with the trade and to lay the foundations for future business. It would be folly, however, to expect immediate and large financial returns. What has been said with reference to South America applies to a large part of the world. Conditions in the neutral countries are being readjusted and are fast approaching normal, and it is, therefore, an opportune time for the manufacturers of this country to be alert and to build up their trade in those countries.

(2) *Are the bankers of the United States prepared to finance the extension of the American foreign trade?*

Is it true that we cannot hope to finance foreign trade on a large scale? Is it true that our having been a debtor nation prevented the extension of our trade? It is sometimes said that foreign trade follows the flag, but it is more truly said that foreign trade follows the loan, or that foreign trade follows the investment. There is no doubt that unless the United States can make loans and investments in foreign countries, our manufacturers and merchants will not be able to develop their export trade to any considerable degree. It is true that we have been a debtor nation and that we are still obligated to foreign countries, but an interesting and important fact is that we are rapidly discharging those obligations, and that we have, within the last six months, turned the corner and are rapidly paying off our indebtedness to foreign countries.

The best evidence of the reversal of conditions and of the fact that the United States is now entering upon a creditor period in her history, is that within the last few months large quantities of gold have been sent here by European nations to pay off their indebtedness to the United States. The low sterling exchange in New York merely indicates that there are more Europeans who have debts to pay in New York than there are Americans who have debts to pay in London, and still further and striking evidence of the fact that we are fast becoming a creditor nation are the recent loans which have been made by our bankers to other nations, as for example, to France, Argentina, Sweden, Germany and Russia. In addition, the nations of Europe have found it necessary to arrange large credits in New York.

We are entering, therefore, upon a period of export capitalism, and we are now in a position, as we have never been before, to invest our capital in the industries and developments in foreign countries.

(3) *Can the American business man, after the war is concluded, hold the markets which he has succeeded in acquiring while his competitors have been otherwise engaged?*

Is it true that the cost of production in the warring nations of Europe will be low as a result of the war, and that we shall therefore not only be unable to hold the new markets that we may gain, but that we shall probably be unable to hold the markets that we had already attained?

The supposition underlying this question which has been widely circulated is that the war will lessen the costs of production abroad, and hence lower prices, and that the combatant nations will then be able to go back into the foreign markets temporarily occupied by the Americans, undersell them and drive them out.

In order to simplify the consideration of this problem, the following elements must be taken into account: good will, interest, labor, prices and taxes. The question then is: what will be the effect of the present war on each of them?

Nations like corporations have good will. When a nation gives up business in certain markets and withdraws in favor of competitors, it gives up a valuable asset which cannot be easily regained. Recently a large European concern sent an official to Spain to wind up its affairs. It is withdrawing from the Spanish market. In this particular line of goods that nation has had only two competitors: one, another combatant, the other the United States. Spain is on the eve of a business renaissance. It is scarcely a question of whether the American manufacturer can get this market left free by the withdrawal of his competitors. He must go there to meet the demands which are not of his making.

With regard to the effect of the war upon interest rates, there is very little information available which would enable one to draw conclusions from past wars. Furthermore, the present war is so much more destructive than any previous war that conclusions drawn from the latter could scarcely be applied to the present. It is stated, however, "that after the Napoleonic wars the rate of interest rose. Russia, France and Austria had to pay more for their loans and that rates of from 7 to 9 per cent prevailed from 1814 to 1820. These rates were noticeably higher than those prevailing before that time." More accurate data are obtainable as to the effect of the Crimean war. It will be remembered that England, Russia, France,

Turkey and Sardinia were involved. In this case the London bank rate, which preceding the war had for ten years averaged 3.10 per cent, in the five years following the war averaged 4.60 per cent. There were corresponding increases in the interest rates at Berlin and Paris.

The next item of cost to be considered is that of labor. The unemployed and the unemployable are not those who are fighting in the front ranks and suffering the severest losses. The skilled workmen, the men in their prime, are bearing the brunt of the war. Many of these men will never return and many others will be crippled and diseased. Not only will the actual effective number of workers be decreased, but the efficiency of labor as a whole will be considerably lowered in each of the warring countries. It will be impossible to reorganize the factories for years to come on a basis as efficient as that in the past. Thus the labor cost in production in those countries will be considerably raised.

Not only the labor cost but actual wages are likely to be considerably increased. Here the experience in past wars sheds some interesting light. Statistics of wages show that wages, expressed in index numbers, were 90.4 in 1850 as compared with 100 in 1860, which was taken as a basis. In 1865 they had declined to 66.2. In the next five years they rose steadily, reaching the maximum of 152.2 on a gold basis in 1872. Statistics of wages in France and Germany after the Franco-Prussian war and in Japan and Russia after the Russo-Japanese war show similar results.

The effects of some of the past wars on prices may be clearly shown by existing index numbers. Representing the average prices in 1860 as 100, the index numbers show that during the eight years preceding the Crimean war, prices in England (Sauerbeck) averaged 85.0, and during the ten years following the war they averaged 103.4. During the ten years preceding the Civil War in the United States prices (Faulkner) averaged 107.1, while during the ten years following the war they averaged 121.6, on a gold basis. In Russia, prices (Ministry of Commerce and Industry) averaged 102.8 during the period ten years before the Russo-Japanese war, and 129.8 during the seven years following the war, the average for the period 1890-1899 being represented as 100. In Japan, the prices of food, clothing and material (Department of Agriculture) averaged 98.8 during four years preceding, and 122.1 during the seven years following the

war, the prices in 1900 being represented as 100. It is likely, therefore, that Europe is entering on a period of high prices. The ten years succeeding this war will probably show high prices of food stuffs, raw materials and finished products.

With regard to the item of taxes which enters into the cost of production, it is only necessary to consider the cost of the present war and the burdens which it places upon the warring nations. The cost of this war is so prodigious that the figures can scarcely be comprehended. The mere statement that England in one year of this war will increase her public debt more than she has increased it in the last 100 years indicates the vastness of the financial operations. Enormous war debts are being piled up by the various European countries, and it must not be forgotten that the previous debts of Europe were already great before the war began.

The cost of the present war has been variously estimated. Mr. Lloyd-George, the British Chancellor, estimated that the cost to the allies of one year of the war would be about \$10,000,000,000. The editor of the London *Economist* estimates that the per diem cost of the war in the larger countries alone, amounts to an expenditure of \$50,000,000 per day. Already extraordinary measures are being employed to raise the sinews of war. In addition to the war loans which are estimated at about \$6,000,000,000, other measures have been adopted. England has doubled her income tax, which now amounts to as much as 8 per cent in some cases. Germany has increased her capital tax, and has even issued treasury notes on security of personal property and jewelry. France has increased the authorized limit of bank notes and is raising taxes generally. But the general policy is evident on the part of the warring nations to secure the necessary funds for war, not from taxes, but from loans. This means that the effects of the war financially are not to be taken up immediately, but are to be distributed by funding operations over the next fifty or one hundred years.

The inference seems to be, therefore, that costs of production in Europe cannot possibly be lowered, and are quite likely to be considerably raised. If this is the result, the European level of costs and prices will more nearly approximate our own than ever. It will also mean that the American manufacturer will be able to compete with the European manufacturers on more favorable terms than ever before.

It appears, therefore, from the above statement of such facts as are obtainable, that the conditions in the world market are such as to warrant invasion by the American business man, not only in South America, but in other countries as well; that we are fast becoming a creditor nation and are now in a better financial position than ever before to extend our foreign trade; and that the costs of production in foreign countries are not likely to fall sufficiently, if at all, to drive American business men from the markets gained during the war, provided they will endeavor to deal with the foreign producers as the latter have always been accustomed to be dealt with.

The attitude, therefore, of the American business man, if he would take advantage of the tremendous opportunities that have suddenly been thrust upon him, and if he would continue the prosperity which he has enjoyed in the past, must be to emerge from his narrow policy of complacency with the home market and dependence upon artificial means to exclude foreign competitors there. He must look beyond the borders of his own country, not only to strive to extend his own trade to the uttermost parts of the world, but to meet his foreign rivals courageously in fair competition, both at home and abroad.

BRANCH BANKS AND OUR FOREIGN TRADE

BY WILLIAM S. KIES,

Of the National City Bank of New York.

Forty English banks operating in foreign countries have 1,325 branches; in South America, five German banks have forty branches and five English banks have seventy branches.

The South American foreign banks and their branches are active agencies for the promotion of trade relations between the South American republics and the home countries. These banks have entered actively into the industrial and economical lives of the communities in which they are located. They have furnished money for the development of the resources of these countries; have financed railroads, harbor works, public utilities and warehouses. They have been instrumental in building up markets at home for the raw materials produced by South America, and have in this manner established a basis for a reciprocal exchange of products. The money of England and Germany has been freely invested in the future of these countries. England and Germany have put into Argentine, Brazil, and Uruguay, in the last twenty-five years, approximately four thousand million dollars, and as a result enjoy together 46 per cent of the total trade of these three countries.

Of course these investments do not represent money taken from the capital of the banks, but the investments of the people of England and Germany in South American securities. A ready market has existed in Europe and on the Continent for South American bonds and stocks, and capital for development projects has been heretofore obtained with little difficulty. Germany has been able to do her share in the constructive work of upbuilding South America because of the effective aid of an almost paternal government, which has worked hand in hand with the commercial and financial interests of the empire for the development of German commerce. German investors have been taught that the prosperity of the country depended upon the development of foreign markets and have felt secure in their investments, knowing that the power of the

German empire would be exerted in the protection of contracts entered into in foreign lands.

England's position as a world power is in the largest measure due to the development of her foreign commerce. She has not only been the world's largest carrier and ablest merchant, but at the same time its greatest banker. England has loaned money in all parts of the world whenever she has been able to see trade returns as a result of the loan. Through her system of English-owned foreign banks, with their branches, she has ever been ready to finance the needs of countries whose raw materials could be used by her factories, and whose people in return could be converted into customers for her manufactured products.

England is the world's greatest market because in it there have always been found buyers for all the various products the nations of the world have had to sell. Should market conditions for particular products be unfavorable, a system of warehouses is at hand for the storage of the goods, and the owner can always borrow on his warehouse receipt, enabling him to hold his goods for a more opportune moment for their sale.

England's preëminence as a world financial market has been due largely to the services performed by the English "acceptance houses," and to the existence of an active discount market for bills of exchange on London originating in all parts of the world. The pound sterling is the common denominator of values throughout the commercial world. Exchange on London has been the means of settlement of transactions in international commerce for years, with a resultant large profit to the English bankers, who levy, in this manner, a tribute upon the commerce of the world.

The "acceptance" is a financial expedient until recently almost unknown in this country. The difference between the method in effect here and in Europe is that commercial transactions have been heretofore financed in this country by notes, and in Europe by bills of exchange. The one is an unsalable investment; the other a prime quick asset. Credit resources of American banks have been strictly limited to the amount of their real assets. European banks, on the other hand, have been in a position to maintain a contingent liability far in excess of this limitation by accepting and transferring bills of exchange. The services performed by the

London bill are not over-estimated by an article in the *London Economist*, printed just prior to the war, which reads:

The bill on London is the currency of the world. It is the only currency of the world. It represents gold but it is better than gold, and is preferred to gold because transferrable with greater rapidity, greater ease, greater certainty, and infinitely less risk of loss. It has therefore become the universal world currency, which, and which alone, the producer and handler of all nations will accept as wholly satisfactory and sufficient. There is nothing like it elsewhere. No such function is performed by a bill on Paris, on Berlin or on New York.

Prior to the passage of the Federal Reserve Act, national banks were not allowed to extend their credit, through the medium of the acceptance, to importers and exporters; neither were there any provisions in our national banking laws permitting the establishment of branches of American banks in foreign countries. There were likewise no national laws under which banks might be organized to operate in foreign countries under the authority and supervision of the United States government. Under the laws of some of the states, banking corporations could be organized with power to operate outside of the boundaries of the United States; but the fact that foreign banks, organized with large capital and well-developed systems of branches, were so thoroughly entrenched in South American and other countries, made the success of American banks problematical, if organized under other than national auspices. Then, too, a large amount of capital was needed in the organization of such branches; and it must be remembered that the United States itself is a borrowing nation, and has been a free user of the surplus capital of Europe in its own development.

The Federal Reserve Act, however, has made it possible for branches of national banks to be established in foreign countries, and to place back of the branches the prestige and resources of the parent bank. The Federal Reserve Act contains a further important provision of greatest value to the future development of our commerce. Section 84 is as follows:

Any member bank may accept drafts or bills of exchange drawn upon it and growing out of transactions involving the importation or exportation of goods having not more than six months' sight to run; but no banks shall accept such bills to an amount equal at any time in the aggregate to more than one-half its paid-up capital stock and surplus.

Section 82 of the act provides for the rediscount of such acceptances, based on the importation or exportation of goods, which have a maturity at time of discount of not more than three months, when indorsed by a member bank.

Acting under the provisions of Section 25, of the Federal Reserve Act, in regard to foreign branches, the National City Bank of New York has established branches at Buenos Aires, in the Argentine Republic, and at Rio Janeiro and Santos, in Brazil. The Federal Reserve Board has granted permission for the establishment of a West Indian branch, with a main office at Havana, and sub-branches at various points in Cuba, the island of Jamaica, and San Domingo. The authority for the opening of the branch at Rio Janeiro carried with it permission to operate sub-branches at Santos, Para, Pernambuco, Bahia, and Sao Paolo. The Buenos Aires branch was opened on November 10, 1914. The branches at Rio de Janeiro and Santos will be opened early in April.

The immediate effect of the opening of the branch at Buenos Aires of most value to the commercial interests of the United States was the establishment on a permanent basis of dollar exchange in the Argentine. The close financial connection of the Argentine with Europe, particularly with England, has in the past worked to the disadvantage of the merchants of this country seeking to do business with Argentine. Dollar exchange has not always been available, and the usual method of settlement has been in pounds sterling by drafts on London. Theoretically, at least, two exchanges entered into every transaction between merchants of this country and those of South America; first from the local currency into pounds sterling, and then from the pounds sterling into dollars. In transactions heretofore, our merchants were at a disadvantage, for the risk of fluctuations in the exchange market had to be assumed by them. Through the operation of branches of American banks, there will hereafter exist in South America, a ready market for dollars, and it may be reasonably expected that the sight draft in dollars, payable in New York, will, to a large extent, supplant the London bill as a medium of settlement for our commercial transactions with South America.

The establishment of dollar exchange in the financial markets of South America on a permanent and attractive basis will be materially aided by the acceptance provisions of the Federal

Reserve Act. By reason of the fact that national banks are privileged to accept bills of exchange drawn upon them, growing out of transactions involving the importation or exportation of goods, there will grow up in New York a discount market for such accepted bills. There is no more convertible form of security than the promise of a national bank of first class standing to pay a sum of money at a certain definite time, when that promise is further secured by merchandise, the proceeds of the sale of which are, at the end of the specified period, to be applied by responsible merchants to the liquidation of the debt. Such short-term paper constitutes the most liquid of assets, and will be greatly in demand by banks, trust companies, and others seeking a safe, short-term investment. With the development of a discount market of substantial proportions, New York will be in a position to take its proper place as an international money market, a consummation that will contribute materially to the commercial growth and financial prestige of this country.

The importance of the new source of credit which will be placed at the disposal of American manufacturers, exporters and importers, by the acceptance features of the Federal Reserve Act, may be appreciated when it is considered that the combined capital and surplus of all the national banks in the United States, in June last, was \$1,781,000,000; and of the New York City banks alone \$237,705,000. National banks, under a recent amendment to the Federal Reserve Act, may now, by authority of the Federal Reserve Board and under their regulation, accept bills up to the full amount of their capital and surplus. With the growth of a discount market, trust companies and state banks will undoubtedly avail themselves of the acceptance method of using their credit, and still further increase the facilities for financing our foreign trade.

The establishment of branches of American banks in foreign countries, will result in giving to the American merchant that form of personal representation which can only be supplied by a bank of his own nationality. In doing business in foreign countries, many days distant by the nearest mail, numerous difficulties frequently arise in the closing of transactions, in the collection of drafts, and in disputes over shipments, in the settlement of which the American manufacturer is at an entire disadvantage. At times these difficulties are so serious as to discourage his efforts in the

development of an otherwise promising field. The knowledge that his interests are in the hands of a bank which is deeply concerned in the development of the foreign commerce of his country, is satisfying and assuring, and offers an inducement to the American manufacturer to put forth his very best efforts for the extension of his trade.

Realizing that South America, to a great many merchants of this country, has been as a closed book, and that a great deal of information was needed concerning market possibilities, and the technical requirements of exporting to South America, the National City Bank has provided a commercial representative upon the staff of each of the branches it has established. The commercial representative's duties will comprehend the doing of trade promotion work in the interest of manufacturers of the United States. It will be his work to study in a thorough and comprehensive manner the opportunities in foreign markets for the products of our factories and workshops, and cultivate personal acquaintances among the business men of the country in which he is situated, so that he will be in a position to give to American salesmen the personal introductions which are so valuable in foreign countries. He will supervise technical investigations into the possibilities of a market for a particular product, so that manufacturers in this country will be able to ascertain the price at which their goods can be sold in a foreign market, the cost of delivery to the market, the supply on hand, the manner in which the particular articles must be packed and prepared for the market, and the finish and quality desired, and the character of the competition to be met. Samples of foreign competitors' goods can be collected by the commercial representative when desired and forwarded to the home exporter for purpose of comparison. When disputes occur in regard to shipments, or information is needed concerning any particular transaction, or a confidential investigation of some question is desired, the commercial representative will be available for this work.

In addition to conducting investigations into commercial conditions and possibilities, the branch banks will of necessity be obliged to establish bureaus for the collection and dissemination of credit information.

The question of the extension of credit, particularly in Latin America, is one that has heretofore presented a seemingly insur-

mountable obstacle to many United States firms desiring to enter the South American field. The long credits which have been customarily granted by German and English business houses have discouraged a great many of our merchants. The fact that collections would have to be entrusted to foreign banks, and the feeling that somehow or other, at such a distance, there were greater possibilities of loss than at home, have contributed to the discouragement. While the large mercantile agencies of this country have for a number of years maintained successful branches in South America, and have been in a position to give credit information, yet the average business man has, in his domestic dealings, been accustomed to receive in addition to mercantile agency reports, bank opinions upon the credit of concerns which sought to do business with him. Branch banks, through their credit departments, will be able to supplement the work of the mercantile agencies, and give to American manufacturers the benefit of their judgment upon the credit standing of business houses engaged in foreign trade.

Credit data, prepared in duplicate, and kept on file in the credit department of the parent branch, will furnish a reliable source for ready credit information for the benefit of American business houses. In time, too, as American branches grow into the industrial and economic life of the countries in which they are established, local merchants may be induced to form such relations with the branches as will enable commercial credits to be opened in their behalf, so that the branch banks may be able to accept drafts drawn against shipments of American manufactured articles destined for foreign markets. In this manner the credit of the branch may be used to directly facilitate the importation of American products, contributing materially to the solution of the long-credit problem.

In order to build up a profitable and lasting commerce in hitherto untouched markets in foreign countries, it will be necessary for us to aid in the development of those countries. Brazil, Colombia, Argentine, Chile, Peru, and other of the South American republics have natural resources of greatest value awaiting development. If in the years to come the United States shall invest its surplus capital in the upbuilding of South America along the same lines which govern the investment of European countries in that field, trade opportunities will result which will show a return to us of many times the original investment.

The American investor, however, must be educated to an understanding of the necessity and desirability of investing money in foreign countries whose markets we seek to cultivate. He must appreciate the fact that an extensive foreign trade will contribute greatly to the general prosperity of his country. He must learn to realize clearly that the successful extension of our foreign trade is predicated not only upon the development of reciprocal trade relations, but equally so upon the free investment of capital for the development of the resources of the countries whose patronage we are anxious to obtain. Branch banks will be able to assist materially in the investigation of desirable openings for capital investment, and in directing such investments along lines where they will be productive of most good to our commercial interests.

A rare combination of circumstances now favors us. The business ties between other great nations whose commercial intercourse has long been reciprocal and friendly have been sundered at the very moment of the creation of the machinery so badly needed for building up of our foreign commerce. Considering the fundamental readjustments in trade relations between many nations that are bound to result from the conflict now raging, the opportunity presents itself to this country to construct in the next few years a lasting foundation for a profitable foreign commerce of large proportions.

Whether history shall record that this nation successfully and intelligently grasped the opportunity, and measured up to the responsibilities of the situation, will depend entirely upon the willingness of our people to scientifically and intensively study conditions, and the problems connected with foreign trade; upon their resourcefulness in adapting themselves to the requirements of foreign markets; upon their ready development of an international viewpoint; upon their aptitude in appreciating the national characteristics and susceptibilities of foreign nations; upon their tact and diplomacy in the cultivation of the foreign field, and upon that which is of most importance, the degree of coöperation which shall be developed among those who are actively interested in the movement for expanding our foreign trade.

SOUTH AMERICAN MARKETS

BY CHARLES M. PEPPER,

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The economic basis of the South American market is reciprocal trade. The southern continent in its variety of natural products, agricultural and mineral, which are wanted by the rest of the world, has an assured purchasing power. Conversely, it is a world market for numerous manufactured commodities, and for certain foodstuffs.

The chief mineral exports of South America are tin, copper, iron ore, gold and silver. In the economic terminology, the Chilean nitrates of soda or saltpetre also may be classed with the minerals. The chief tropical agricultural products are coffee, rubber, and cacao. These are supplemented by hardwoods, dye-woods, and various other forest products. The agricultural products of the temperate region, which comprises Argentina, Uruguay, Southern Brazil, Chile, and the high plateaus of other countries, are the cereals, beef and mutton, wool and hides. There is a constant world-demand for these commodities which is little influenced by competition from other sections.

Natural circumstances combine to make the South American countries, as a group, heavy buyers of iron and steel and kindred manufactured articles. Where the raw materials exist for a basic iron and steel industry they are too widely separated to be assembled.

Brazil has abundant manganese and enormous iron ore deposits three hundred miles from the coast, but no coal, except in a few localities where meager local deposits serve for domestic purposes. Chile has iron ore in the north, and lignite coal along the southern coast, but this is not suitable for blast furnaces, and the iron ore finds a more profitable market in Bethlehem than in Chile. Oil exists in northern Peru, and is utilized on some of the railways for fuel, but Peru has no iron ore and coal deposits capable of commercial development by being assembled at a single point, except at a vast expenditure for transportation facilities. Argentina has oil fields in the south, but no iron ore, copper, or coal.

The future will see a development of the latent water power in the Andes and elsewhere, and electrical industries will benefit by it, as the Peruvian smelters are now benefiting. But taken in the broad sense, South America, for at least half a century, may be considered as a non-manufacturing continent. It is, therefore, the natural market for manufactured commodities of foreign countries.

Mining machinery always will be in demand. So also will be agricultural machinery. The fertile prairies of Argentina are like the Mississippi Valley, but Argentina has not the raw material for manufacturing the semi-finished materials which have enabled an agricultural implement industry to grow up in the middle west.

The limitation of raw materials convenient for assembling at a common industrial center does not mean that there will be no manufacturing industries in the South American countries. These already exist, but they are of the lighter variety. For example, Peru years ago began to utilize part of her cotton crop in her own mills. Brazil is doing the same thing. Argentina in time will employ some of her hides and wool in domestic industries, such as leather and knit goods, as she is now using some of her wheat crop in her own flour mills. But Argentina will not make steel rails and locomotives for her extensive railway system. Nor will Brazil for her system.

The South American countries which have tropical agricultural products to export are natural buyers of some of the food products of the temperate zone. Though they have areas suitable for the cultivation of the cereals in the intermountain valleys and the highlands, these are of limited extent. Flour and packing house products are always in demand in these countries far in excess of the local supply.

With salient facts of this kind in mind, a general survey of South America as a market, and as a factor in world commerce, may be taken.

In a geographical way, as relates to commerce, South America may be divided into three regions. These are the Caribbean coast, extending from the Isthmus of Panama to the Guianas; the east coast, extending from the mouth of the Amazon to the Straits of Magellan; and the west coast, stretching from Panama to the Straits. By this method of grouping, the diversity of products,

which are the basis of exchange, and which furnish the purchasing power of the inhabitants, is established.

A glance at the map, and the parallels of latitude, shows that the Caribbean coast region produces almost entirely tropical commodities which are wanted in the temperate regions. Coffee, cacao or chocolate, some rubber from the interior river districts, bananas and other fruits, and dye-woods and hard-woods, are the chief export products. There are also some of the precious minerals.

The east coast and the territory back of it cover the region with by far the largest population and with the greatest variety of products, since both temperate and tropical are included. Brazil, for instance, is not only the leading source of the world's supply of coffee and an important source of rubber supply, but in the southern district the cereals are grown, and there is an expanding livestock industry. Argentina and Uruguay, although politically separated, are identical as a producing region. The wonderful development of Argentina is almost entirely agricultural. The world is seeking its wheat and other cereals, its beef and mutton, and hides and wool, while Uruguay also is supplying wool and hides.

The total trade of the east coast countries in some years is seventy-five per cent of all that of South America. Rio Janeiro, with a population approaching 1,000,000, and Buenos Aires, with more than 1,600,000 inhabitants, are on the east coast. The increase of population through immigration is to be looked for in central and southern Brazil, Argentina, and Uruguay.

The physical geography of the west coast shows the great Andean mountain system with numerous chains and subsidiary ranges. This naturally suggests mineral wealth, and the trade of the west coast is based largely, though not entirely, on the mineral products. In addition to the minerals are the rubber, which comes in part from the Amazon affluents, the coffee, cacao and ivory nuts of Ecuador, the sugar, fine cotton and alpaca wool of Peru, as well as the cereals of the central valley of Chile. But the output of Chilean and Peruvian copper, Bolivian tin, silver from all the Andean countries, and the nitrate fertilizers of Chile, are the leading sources of purchasing power.

The normal foreign commerce of the South American countries exceeds \$2,000,000,000 annually. This excludes the trade of the

countries among themselves, although in official reports this trade is given under the heading of foreign commerce.

Until the commercial and financial crisis, which preceded the world war, involved the South American countries, and was rendered more acute by the hostilities, the prospect was that the foreign commerce of the continent as a whole would mount without interruption to \$2,500,000,000. That may be taken as the prospect after peace is restored. It also may be assumed that on a basis of \$2,500,000,000 foreign commerce, the South American exports will apparently exceed the imports by \$250,000,000 to \$300,000,000, but in passing it may be said that there is no real balance of trade in favor of South America as a whole, since the remittances on European loans and European investments offset the excess of exports.

In analyzing South America as a market for the products of the United States, and the United States as a market for South American products, it is necessary to clear away some conspicuous errors. One error relates to geography. The Caribbean countries may be called contiguous. The Panama Canal makes the west coast an extension of our own Atlantic coast. There is, consequently, some geographical advantage to North American exporters. But, as has been shown, the mass of the South American population and the larger part of the commerce are in the east coast countries, and, geographically, the advantage of the United States in relation to them is small. Buenos Aires and Rio Janeiro, by the most feasible ocean routes, are little nearer to New York than to Genoa, Barcelona, Hamburg, and Southampton.

Nor must it be ignored that the streams of immigration which feed the population of the east coast countries are from Europe. The tide of immigrants from Italy and from Spain flows steadily into Southern Brazil and Argentina. Brazil is also freshened by the immigration from Portugal. Common language, customs, newspapers, and constant intercourse with the country of origin therefore give Europe a marked advantage in supplying consumers in the east coast countries.

Another conspicuous error, propagated from the stump during political campaigns, has been that our trade with the South American countries is very small because our tariff has not been liberal enough. The truth is that the vast bulk of South American products have been admitted into the United States free of duty for a

long period. Rubber, coffee, cacao, tropical fruits, such as bananas, and hard-woods, have paid no duty; nor have copper, tin, and nitrates.

Under the Dingley tariff and the tariffs that preceded it, not less than ninety-seven per cent of South American products were admitted free of duty, and in some years the average was greater. With some countries it was practically a hundred per cent, as was the case with Brazil. The Underwood tariff, by placing wool and cereals and meat products on the free lists, has brought up the percentage as related to Argentina, but it has not affected the general equation.

The drawback to increasing the trade of the United States with South America has been a home market which many manufacturers regarded as sufficient. A further drawback was the practice of dumping surplus products in the years when the home market was inactive. Both these conditions are now past, and cultivation of the South American market is to be looked on as part of our campaign for permanent foreign trade.

In a discussion of some of the principles which underlie trade with South America, and which are fundamental, it is annoying to have to turn to petty questions, such as packing, English catalogues, non-Spanish or non-Portuguese-speaking salesmen, and ignorance of local trade requirements and peculiarities. So much is written on these matters that they may be omitted here, with one exception. This exception is the peculiar requirements of the textile market.

The European war dislocated the textile market of Argentina which is worth \$40,000,000 annually. Germany and Belgium were put entirely out of the business, and the English mills, on account of war conditions, were embarrassed. The United States could have had an immediate participation, which would have been a permanent participation in this market; but the cotton mills, although they had been given abundant information regarding the patterns which were wanted by Argentine consumers, were not in a position to enter the market, because they were not making the kind of cotton fabrics that the Argentine consumers liked. These Argentine consumers will not take cotton fabrics that do not suit them. All the homilies about the textile trade that awaits

the United States in Argentina will not change this fundamental fact.

The long credits required by South American importers have been an unquestionable drawback to the extension of trade with the United States. For years to come it will continue to be a drawback, but the situation is susceptible of amelioration. A compromise, or an approximation of credits, may be worked out, on the basis of the ninety-day draft on New York. The establishment of branch American banks makes this possible. It also overcomes the other serious handicaps that have existed. So much has been written about the lack of banking facilities that, since this deficiency is now in a way to be overcome, it does not need detailed discussion.

Two basic requirements must be heeded if the South American market for the products of the United States rises beyond the \$125,000,000 to \$150,000,000 limit which now measures it, and if the United States is to reap the full and legitimate advantage growing out of the dislocation in trade connections caused by the European war.

One is the encouragement which should be given American manufacturers and exporters to cooperate or combine, by means of selling organizations, in marketing their products. Competition of other countries can only be met by this means, and the South American market in all circumstances, and under all conditions, is essentially a competitive market. If our anti-trust laws make such combinations illegal, as is maintained, they should be amended. No amount of generalities will do away with the necessity of permitting cooperation or combination in the foreign market. It is a question of pooling South American trade.

Another fundamental proposition, and the most important of all in increasing trade with South America, is the investment of capital from the United States in loans and in construction and similar enterprises. The country, whose capital is invested in a South American country, is going to get the most of the contracts for materials used in construction enterprises, railway building, and the like, as well as the contracts for public improvements carried on by the governments. England's investments in Argentine railways, banks, and loans are the living evidence of this fact.

German investments in banks, and in commercial partnerships, are in further testimony to the efficacy of this plan.

The exhibit is before the United States. A beginning was made in the absorption of the Argentine loan. Participation in other South American loans and in investment enterprises should follow on an expanding scale. In proportion as it does, the trade of the United States with South America will expand.

THE UNITED STATES' OPPORTUNITY TO INCREASE ITS FOREIGN TRADE WITH SOUTH AMERICA

BY LORENZO DANIELS,

New York City.

Trade opportunities in South America are now before the public of the United States. Much has been said about them by the departments of the government, chambers of commerce and commercial trade conventions throughout the country. To appreciate exactly the practical side of these opportunities, it is desirable to start with the fundamental conditions governing the development of such trade or business. To do this it is desirable to divide the business under several captions: first, financial operations and permanent investments; second, enterprises that pertain to the development of the growing countries of South America, such as public service corporations, railways, the construction of manufacturing plants in the countries themselves, companies for colonization and industrial development and mining operations; third, the movement of competitive products, such as grains, wool, meat, coffee and other natural products of the countries; fourth, the export of our manufactures.

In entering any one of the above fields, it is desirable to decide whether the entry is to be on a permanent basis, qualified to meet local conditions and competition at the foreign points as may arise from time to time, or whether the opportunity is only desired when the market is a profitable one as compared to our domestic market or other world markets that may be more favorable.

Reverting to the question of finance, it would be of great assistance to the trade as a whole if American banks could be established in all the principal centers of South America, with their own organizations on the spot eager to promote American business and interested in its success and development. These banks would have not only the opportunity of financing the general banking business of merchandise and travelers, but would also unquestionably have the opportunity of backing promotive enterprises, if money could be obtained in the United States at a competitive rate of interest as

against the banking centers of Europe, such as London, Paris and Berlin. These centers have in the past furnished most of the money for South American developments and, as compared to the United States, they have always been able to procure and supply this money at a lower rate than its equivalent value in our own markets. Whether the war will change this condition is problematical, but on this question lies largely the extent and character of the development of our own identification with the growth of South American interests. It is to be hoped, if our banks enter this field seriously, that they will look at the matter in the broad term of years and not of daily fluctuation of interest values.

If the United States should invest several hundred millions in South American enterprises promoted by this country and with the securities marketed through our own stock exchanges, the personal interest of the people of the United States would be largely increased in the results of South American business; and, incidentally, because of these promotions a great many people from this country would be called to active participation and to take up their residences abroad. American communities would promote the extension of business in a much wider field and the personal contact would lead the merchants and governments of South America to look to the United States for support in their development and would give us the backbone and strength of a much broadened business opportunity in South America.

To accomplish the success of these enterprises, to establish confidence and to give security to the investors, our home government would be called upon to adopt a policy of cooperation and security that up to the present has not been one of the recognized policies of the government. Capital and investors can hardly be expected to place their money at such a distance and beyond the regulation of our own laws, without some assurance or pledge from our own government that the international relationships and obligations will be safeguarded. It is unquestionable that the European countries now at war will for a number of years at least have much less capital to spare for investment in foreign countries than they have had in the past. Our largest opportunity, therefore, is in this field of development.

The movement of raw materials, such as crops, agricultural products, minerals and foodstuffs, will all take a natural course of

supply and demand and need hardly come under the head of business opportunities. As our own country becomes more thickly settled and our wants increase and supplies shorten, we shall have to look to the large area in South America to supply us more and more with a share of foodstuffs. The supplies from the cattle ranches in South America are today easier and more cheaply marketed on our seaboard than our own supplies from the far west. These conditions will become a question of route and territory definition. I feel that the large users of raw material, whether in our food consumption or in our manufactures, will arrange to supply their demands and needs from the cheapest source and that the development of this class of trade will, as I have said, be one of natural supply and demand, governed chiefly by natural conditions.

We now come to probably the most detailed and interesting opportunity of all, that pertaining to manufactures. If we include in this class the large manufacturers of steel products, rolling stock, machinery for power plants, mines, etc., the volume of this business will feel very decidedly the growth of the American financial and promotive interests in South America. In actual competition with Europe today these trades are often handicapped by the large purchasing companies owned and controlled by foreign capital who naturally prefer to place their orders where their personal interests lie. But our larger manufacturers have studied the world fields very carefully; they know the quality and value of their goods. If they are able to supply a superior article at a relatively lower price, they are able to seek the orders and to establish a connection through the purchasing departments of these active companies.

As regards the smaller manufacturers who cater to the individual wants of the people, there is, of course, with the shutting off of the European markets, a great opportunity to introduce American articles. But, as I have stated earlier, it is a mistake for any of these manufacturers to enter the South American markets just on the spur of the moment and with the knowledge that they cannot compete with similar goods from Europe after the war is over. This class of business must only exist and reap its profits during the unusual conditions that prevail today. Should the United States manufacturer desire to open a permanent connection in South America and, having taken advantage of the present opportunity

to introduce his goods successfully, decide to hold his market and fight for the trade later, irrespective of the possible temptation of a rising market in the United States, he will have to look at conditions for a period of years and set aside, if in his judgment he can do so profitably, a certain proportion of his output to go to customers he has secured in South America and be prepared to fight any competition that may develop later. This class of goods is being introduced today throughout all of South America through established commission houses, through whom the inquiries come from South America expressing the want that is there for goods that were previously supplied by other countries. Such orders can be marketed through a permanent connection of middlemen, such as the commission houses. If the manufacturer has sufficient business to warrant the dispatch of special salesmen and the establishment of his own organization abroad, the present is particularly a golden opportunity. The population of South America have a great many needs that imports only can supply. Exactly what their buying power will be with the general readjustment that must necessarily follow the war, is problematical. But the fact remains that the volume of this trade must necessarily continue to be large.

The war conditions affect different portions of South America differently. Those sections of the country that have produced articles, the consumption of which has been curtailed by the war, are suffering a financial stringency and are in the same condition as are the cotton growers in this country. Other sections of South America that have produced the foodstuffs and articles that are now in great demand are benefiting greatly by the enhanced prices, the same as our wheat, wool and provision suppliers of this country. Other sections of South America from which the exports have been comparatively small and the imports largely of a personal character are practically unchanged in their general condition by the present war conditions.

In the development of all business with South America the usual acumen, care and close study of conditions are essential to success. It must also be recognized that where merchants enter new fields they have to consider carefully the conditions of trade and commerce and the customs that exist in those fields and arrive at a happy compromise between their own ideas and the ideas of

the purchaser, if such ideas at the start are at variance. In other words, the success of any trade depends upon both the buyer and the seller being mutually protected and mutually satisfied to go ahead. If the personal intercourse between the people of the United States and the people of South America could be increased, it would be of great advantage to the mutual development of business. South American merchants should be induced to visit the United States, meet the manufacturers and sellers of our goods and exchange information and views. In turn about, American merchants, where possible, should get a personal touch with the South American markets and a personal grasp of their conditions and requirements and opportunities.

The vital question is the seriousness with which the merchants of the United States consider the present opportunities in South America and whether they consider them worth while as a permanent connection. If so, no merchant in the United States needs to be told in detail how to go about getting the business. I take it for granted that every successful merchant knows that the way to get business is to get it.

COÖPERATIVE PIONEERING AND GUARANTEEING IN THE FOREIGN TRADE

BY EDWARD A. FILENE,¹

Boston, Mass.

At last the great forces hitherto largely employed in developing and providing the greatest "home market" in the world are striving toward wider fields for conquest. American commerce also comes soliciting a "place in the sun." Oversea trade is no longer to be regarded with hasty complaisance—freely received in times of surplus production or periods of depression, to be forgotten when domestic demand again stretches out eager hands. Delayed, but none the less deep-seated, has come the firm conviction that foreign markets can be won if they are treated as primary markets, whose requirements should receive as much attention and study as our own, instead of regarding them as the outlet for our overflow or graveyard of our own manufacturing mistakes.

Thus, for the first time in the history of the United States, the fact that great expansion of trade with foreign countries is of fundamental importance is clearly apparent. United States as a nation not only actually desires and needs a larger foreign trade, but seems willing to pay the price for it in hard study, planning and fundamental work. But this desire and need come at a time of most extraordinary conditions all over the world, and, therefore, can be met only by new and radical methods. If we cannot find and use such methods, we shall fail eventually, and although we may make temporarily an apparent success, the result will be great losses for all but the exceptional few.

New machinery for making foreign trade must be found and tested, and this machinery must be superior to any employed by our competitors of other countries. Happily the business men of this country are renowned for their ability to scrap out-grown machinery and to invent new.

On previous occasions we have made spasmodic efforts to cap-

¹The author wishes to acknowledge his indebtedness for considerable help in connection with this article to Mr. A. J. Axtell.

ture foreign trade. In each instance, however, the flutter has died away when the gale of boisterous publicity has subsided. Our prospective customers, especially in the Latin American countries, have been inclined to view these forays as a scramble after the agile dollar, and have cast their lot with the slow shilling and equally slow and perhaps surer mark. Old Europe, wise with the seasoning of centuries of commercial experience, has smiled at our boast over "favorable trade balances," taken our shipments of raw materials, and grown richer in returning these same raw materials in the form of manufactured goods.

Europe has always been painfully solicitous about encouraging American exports—of foodstuffs and raw materials. She can view with undisturbed complacency consecutive decades of "favorable trade balances" furnished at the expense of impoverished soil, depleted mines, and denuded forests.

On account of the great world war that is going on this buying power is seriously threatened not only in the warring nations but also in the neutral nations. Even before the war began, in every important country of the world, it had been reduced by the high cost of living, which had been mounting so fast as to become a serious burden. This high cost of living will inevitably be largely increased by the cost of the war; for even if that cost is capitalized, the interest on it will add very heavily to the burdens of every citizen in every country involved. And if the settlement of this war is such that Europe remains an armed camp and every nation must strain itself to the uttermost to keep its armaments effective as compared with those of rival countries or enemies, there will be added to that increased high cost of living the enormous additional cost of the increasing armaments.

This will curtail the buying power of all warring nations and may limit the purchases of the masses practically to the necessities of life for many years to come. Countries suffering from such conditions can offer but poor markets for trade expansion, however good our planning for such extension may be. More than this, their curtailment of buying power must react so strongly upon the other countries of the world, upon South America and Asia, for example, as to make these other countries also poorer fields for our trade expansion than they would otherwise be.

It becomes apparent at once, then, that great exertion and great expense for foreign trade expansion must be accompanied by at least equal exertion to make the terms of settlement of the present war such that Europe will not remain an armed camp.

I will say, right here, that I am not attempting in this article to pose as an organizer of peace compacts, for I have never in my life belonged to a peace organization. I am, rather, presenting my views as a business man, presenting what I believe to be the fundamentals necessary to permanent trade expansion.

As responsible men we should ask ourselves: What can we men do, what can the United States do, to help bring about the right terms of settlement of the war? The question is of course difficult to answer. The great nations of the world are locked in deadly struggle, and this struggle is so fierce that at the present time there seems to be no opportunity for any outside interference, however well intended; moreover, there is apparently no chance of peace being made on any terms in the near future. From my study on the spot I am convinced that any fighting government that attempted to make peace now, on any terms conceivably acceptable to their enemies, would perish under the wrath of their citizenship, who would fear that the great sacrifices they had made would not result in the indemnities and other advantages that they had hoped for.

The warring nations, then, will not propose terms of peace until either exhaustion or victory comes. The neutral countries, although they are seriously affected and suffer seriously from the effects of the war, can have little hope that any proposals they may make will be acceptable now.

Tentative attempts in this direction have failed. The danger is, therefore, that peace will eventually be made by the warring nations alone and through the same diplomats who were not able to prevent this devastating war. If that happens it is almost inevitable that the terms of peace will carry the seeds of the next war, leave Europe an armed camp, and will keep the whole world for years to come so impoverished that few if any countries will be profitable fields for trade expansion.

Fortunately, however, in the United States all the warring nations are represented by great numbers of men who were either born in one of those nations or are the immediate descendants of such

people. If, therefore, the business men make it their business to bring about a nation-wide discussion of the terms of settlement and the principles underlying more permanent peace, I believe that we can get results. At first there may be confusion, errors in the discussion, and naturally racial prejudice. But gradually a better understanding of the fundamental principles, rights, and possibilities involved will come and the discussion will attract the attention of all the parties to the strife in Europe. They will in turn be tempted to communicate, through their compatriots in this country, something of their own attitude toward the settlement of their differences. We would find, I firmly believe, that the ideas in the minds of the German people, of the French people, of the English people, of the Austrian people, and the others would filter through to their representative groups in this country. More than this, their governments, I believe, would in this way use this country as a laboratory in which to test the probable reaction of their own and their enemies' countries as to different terms of settlement, a thing which they regard as impossible in the warring countries at present. From all this there will grow up in the minds of people in this country and in neutral countries a comprehension as to what terms of settlement are fundamental for a lasting peace, and I believe that comprehension will also filter through to the masses in the warring nations. When the terms of peace come to be agreed upon, this knowledge and the will for more permanent peace that it produces, will help to make a settlement that will not only be the basis for a greater and more lasting prosperity and happiness for the inhabitants of the warring countries, but will also have a large part in making the whole world a better field for trade expansion.

May I add a word of warning? If the United States is to have any direct influence finally in the terms of settlement of the war, such influences will depend largely on the confidence the warring nations have in our fairness and justice. This will be tested most largely by whether we play the game fairly during this war. If the warring nations come to believe that we are selfishly exploiting the war, we shall have little influence with them, and, as I have said, a bad settlement will leave Europe an armed camp and among other great evils diminish the buying power of the world. We must play the game straight and not hit below the belt—not try to take

unfair advantage of the present export trade or the helplessness of any of the fighting nations.

But granted that the war is finally over and the terms of settlement have been such as will at once or in time make all the warring nations better fields for trade expansion, yet there are other fundamental factors that must be rightly dealt with before we can obtain any important trade expansion.

It is by scientific study of such fundamentals, by industrial and vocational education, hard work and very thorough organization of national and international business machinery that the Germans have won for themselves one of the foremost places in the world of commerce. The other great countries also have done similar work in varying degrees. These qualities will not be extinguished by the war. On the contrary the necessity of rehabilitation after the war will make them redouble their effort for foreign trade.

While, therefore, we may be able to greatly increase our exports during the next two years, the outlook is that after the warring nations have ended the war and reestablished their producing organizations, the competition for the world's markets will be fiercer than it has ever been before in the world's history. Moreover, some of the warring nations, if not all, will be obliged to get this trade at whatever price they can, and will undersell us. Even then they will be able to make profits because labor will be forced to accept lower wages and employers a lower scale of living than their competitors.

Affording a clear relief against the confusing blur created by our feverish outbursts of foreign trade activity stand the notable successes of American industry. But in order to extend the scope of this new development, and also make it a lasting one, there are, however, several new methods which should be carefully studied. It must be a development backed by well organized sale departments, offering merchandise of an approved and established standard as articles possessing not only the stamp of Yankee ingenuity, but also carrying a label of guarantee with all the dignity that the United States can lend to such an article. And to this special piece of machinery I choose to call attention under the new term of the "quality stamp."

This quality stamp would give us a better chance to win our

share of the world's markets against the very able English, German and French competitors, who now largely possess them. I suggest that each national trade organization create and own a copyrighted quality stamp. This stamp attached to the goods should guarantee to the consumers that they are of the standard quality, fixed and described by tags or other means on the goods they are about to buy. Exporters desiring to use this stamp would have to agree to observe the standards and conditions of its use, and also give a bond. For any material violation of the conditions, an offender would be subject to a forfeit equal to his bond and probably also lose the privilege of the stamp. Since the stamp will be a valuable selling aid, no exporter will be willing to put in jeopardy his right to use it. A brief illustration of this influence of reliability on trade, as per this quality stamp, is shown in our failure as a cheese exporter and Canada's success—because the Canadian government absolutely guarantees the quality of Canadian cheese exports. If the above-mentioned methods are followed out, I firmly believe that we, as a nation, will be able to get the same thing in a more efficient way.

We must, however, consider the needs and wishes of oversea customers as deserving of quite as much attention as domestic requirements; thus we will have blazed the trail into every country on the globe. This pioneer task has been performed chiefly by the leaders in American enterprise—big business, if you will—but the path worn by these exporters of steel, oil and tobacco products, farm implements, sewing machines, cash registers, and typewriters can be followed by thousands of small manufactures, and the rewards will be contingent only on their attitude and methods.

We are no longer almost exclusively an agricultural people. In 1880 the products of the soil formed 84 per cent of our total exports, and in 1913 the proportion had dropped to 46 per cent. In 1880 manufactures constituted 15 per cent of our export, and in 1913 this proportion had increased to 49 per cent. In spite of the fact that more than 60 per cent of the world's acreage of corn is located within our boundaries, we exported not more than 8,000,000 bushels of this cereal from the beginning of October, 1913, to the end of February, 1914. While this miracle of the season's wheat crop has again furnished occasion for agricultural optimism, our farming methods will have to undergo a marked improvement if our supply

of bread-stuffs is to be more than adequate for domestic consumption.

In addition to the gradual change from an agricultural to an industrial basis it is necessary to consider certain other features, less fundamental, perhaps, but equally potent in their bearing on the character of our commerce. The new tariff law has been accepted as placing us on a competitive basis in the world's markets with other manufacturing countries. In order to maintain our place with other countries in those markets, we must necessarily equip ourselves. Our surrender of neutral ground to the European competitors would enable them to reap the advantage of larger profits, thus giving strength for the campaign to capture American trade on a price basis which domestic manufacturers could not meet.

The opening of the Panama canal gives new highways of commerce of the western Hemisphere. It will be seen at a glance that the nation which is best prepared will be the one to reap this new advantage.

While certain hopes may have arisen with regard to the benefits the federal reserve law will directly confer in the promotion of foreign trade which are as yet unfulfilled, it is at least conceded that it can help to carry out the declared purpose of President Wilson, that trade shall be free. The privilege granted to reserve banks for the establishment of foreign agencies paves the way for the creation of direct banking relations with other countries, the lack of which has always been regarded as a restraint upon oversea commerce. The following factors, therefore, may be regarded as furnishing the underlying basis for our effort to obtain an increased share of foreign trade. The changing of industrial conditions, a tariff forcing us into more direct manufacturing competition with older countries, the benefits involved in the completion of the canal, and new advantages that have been created by the passage of the new currency law. The time is ripe. Then as if to give dramatic emphasis to the hour that has struck, paralysis attendant upon war benumbs the energies of the old world and for a time we are given greater access to neutral markets. Accident or otherwise, our opportunity has arisen, an opportunity such as never before existed. Are we equal to it?

Foreign students of our commercial life take the view that we are never likely to succeed permanently as important factors in

world commerce, principally because it is not a matter of life and death with us. According to the last documental census, our manufactured products in 1909 reached the enormous total of \$20,672,052,000. Estimates by the Bureau of Manufactures based on this showing placed our total manufactured products last year at \$25,000,000,000. This is more than the total of the manufactured products of England, Germany, France, Belgium and Holland, combined. Our foreign exports of manufactures, therefore, represent only 4.7 per cent of our total output of such products. England, Germany, France, Belgium and Holland shipped abroad a total of manufactured goods equal to 60 per cent of their production. The record per capita of exports from the United States—reached in 1913—was about \$25. Those of Holland were \$210; Belgium \$100; Great Britain \$53; Germany \$33; France \$32. The assumption that America will not obtain an increased proportion of foreign trade, because it is demonstrably not vital to its commercial existence, can hardly be supported. Proper appreciation of the American temperament suggests that refuge in the last ditch is not essential to arouse a fighting spirit. Adequate incentives undoubtedly will be found in the realization that exports aid in stabilizing home industry, that foreign business may be profitable without a profit if it reduces costs in our country; and that the expansion of our oversea trade is necessary as a defensive as well as an offensive measure. Our manufactures must maintain a great volume of production in order to meet success on the narrowed margin of profits brought about by increased competition with foreign manufacturers. Moreover, our recurring periods of depression, if not prevented, would at least undergo some mitigation, as a result of commercial expansion because our foreign trade would take up some of the slack attendant upon an over rapid advance.

No extraordinary success in world commerce has been achieved by any nation without a certain command of the machinery by which it is conducted—ocean transportation, banking, exchange, and insurance facilities. America may accomplish this miracle without the aid of this equipment, but reliance upon fortuitous circumstances in lieu of approved methods is an invitation to disappointment. The manufacturer who makes the goods and the merchant who sells them undoubtedly come first in the list of essential factors. A general discussion of our bid for an increased share

in the oversea trade, therefore, entails the problems of how the products are to be manufactured, sold, financed and transported.

Although there are notable exceptions where individual concerns have created important foreign markets for their products, experience has taught that all foreign trade, in really worth while quantities and permanent, must be obtained by the coöperation of business men; and this is based on the fact that the markets to be conquered must be thoroughly studied. Moreover, they must be continuously watched and re-studied if the trade is to be retained. Such study and investigation is too costly for all but a few exceptionally large concerns. Personally I believe it is not the best method for even such firms to work alone, because a market laboriously earned may be ruined by commercial misdeeds of irresponsible or fraudulent home competitors or even by the ignorance or carelessness of honest firms.

Those manufacturers who have won success in foreign fields, especially in the less developed countries, have given first consideration to the fact that the foreign market must be treated as a primary market. This is a method followed by Germany, Great Britain, Holland, Belgium, and to certain extent by France. Therefore, it seems trite to say that the articles to be sold must be something that the foreign customer really wants. This truism, however, has never been fully appreciated by the American manufacturer. With a few notable exceptions, there have been no systematic efforts to meet the requirements of foreign buyers. In times of depression, the threatened congestion has aroused an impatient eagerness to sell, not what the foreign market needs, but what the domestic manufacturer has on hand. This policy has been largely responsible for the complaint of rejected shipments and unpaid accounts which has loomed like a scarecrow in the fertile field of foreign trade.

An important place also must be given to the attitude which the government of the exporting country maintains toward its citizens who are engaged in foreign trade. Thanks to the increasing efficiency of our consular service, and the helpful interest manifested by the department of commerce, we have another potential source of help to prevent the American manufacturer from rushing blindly into unprofitable errors. Specific reports on the demand for certain products, surrounding market conditions, tariff restrictions and credits are available from this source upon inquiry. The bureau

of foreign and domestic commerce of the department of commerce has been constituted the ganglion of our system of trade development. Recently, through the assignment of trained specialists known as "commercial attachés," to the task of studying foreign manufacturing and business methods, a step has been taken to grant to our commerce a place in diplomacy which will in due time rival that which previously has been monopolized by our international political relations.

In recent years diplomacy has been turning more and more to the furtherance of foreign trade. This function, previously largely confined to negotiation of commercial treaties, now works for government contracts, concessions, and participation in loans, the safeguarding of patent rights, and the opposition to laws inimical to the extension of trade.

Germany presents the most striking example of results achieved by the coöperation of government with business. Through the unremitting vigilance of its foreign office and the enactment of favorable legislation, German commerce has been given a stimulus and vigor which the energy of its manufacturers and merchants alone could not have imparted. The government policy even goes to the extent of forcing unusual credits from banks to exporters of granting freight reductions on railroad or steamship lines, in order that foreign competition may be met. And yet once more German methods may be cited with profit. The export business of thousands of small German manufacturers is handled almost entirely by large selling units, which have been found to perform the merchandising function more efficiently and economically than would be possible by the individual of moderate resources. It is necessary to employ men of high character, thorough business training and equipped with a knowledge of the language and social and business customs of the country to which they are assigned. Strong selling organizations under American management, equipped to give adequate service to the exporting manufacturer and the purchaser, and to furnish the needed capital for extending credit, would solve the problem of the disposal of our product and remove from that branch of commerce many of the traditional difficulties which have hitherto stood in the path of our pioneers seeking foreign trade.

The mercantile intelligence of Great Britain, and later of Germany, has been alive to the importance of developing the resources

of the countries in which attempts have been made to expand trade. Funds advanced for the building of railways, tram lines, irrigation works and public improvements involve a preference in the furnishing of equipment and supplies and in numerous cases a voice in the administration of the new projects. It has become the established practice in loan contracts, made by the leading European countries with less developed countries, to stipulate that materials shall be furnished by manufactures of the country lending money. While we have been dazzled by the shibboleth—"trade follows the flag"—the practical old world merchant has built up his solid success on the principle that "trade follows the loan." The magnitude of European investment in the new countries is almost as difficult to grasp as astronomical dimensions. Sir George Paish in the last annual of the *Statist* estimated that upwards of \$40,000,000,000 of the capital had been supplied to the less developed countries by the five lending nations of the world, Great Britain, Germany, France, Belgium, and Holland. The investment of this vast sum has enriched both borrowers and lenders. The aggregate value of the imports of the five lending nations two generations ago was less than \$1,250,000,000. Largely owing to the impetus given to industry by the advance of capital for development these same five countries are now buying \$10,000,000,000 worth of goods annually from other countries. On the basis of the London stock exchange listings, British investments in Latin America are estimated at \$5,800,000,000, yielding an annual return of more than \$200,000,000. The purchases of the United Kingdom from Latin America in 1912 were only slightly in excess of \$300,000,000 and the investment returns paid nearly two-thirds of the bill.

Investing power is a national asset. It can be utilized when other advantages, such as cheap labor, cheap raw material and improved machinery have been reduced to a common factor and cancelled. We are a nation of borrowers. So was Germany when she started to build up her foreign trade. She took advantage of her high credit to borrow at low rates, in order to have funds available for her customers at higher rates. The big returns on these advances rest on the principle that the obligation of the borrower is not confined merely to the repayment of the debt.

I propose one other important new piece of machinery which will help us greatly in our quest for trade expansion—the insurance

of contracts. By this I mean that trade organizations, or insurance companies created by them, shall insure the contracts for delivery of goods that they sell. What I mean is this: Every man who buys a bill of goods from the United States should get with the purchase an insurance policy which will insure his getting, within the agreed upon time, the quantity and quality up to sample of goods he has ordered, or else an agreed upon indemnity which will make up for the loss which the failure to fulfill the contract may have occasioned.

Connected with this should be a system of arbitrating on the spot any differences that may arise between buyer and seller. As the insurance company would have the right of recourse to the producer, the cost of such insurance would be comparatively trifling and could be paid without any hardship.

On the subject of adapting American products to foreign ideas, United States Consul General at Large, J. E. Dunning, has this to say:

The requisite for permanent foreign business is a genuine superiority in the goods themselves—a superiority so obvious that it will always stand above mere price, terms and distances of deliveries. Cheapness never has been, and never need be, the distinctive feature of American export goods. High quality of the maximum of service are the best assets for American exporters and it is on these features that they have made their way where they have succeeded and can continue to do so. This is equally true of automobiles, of typewriters, office supplies, machine tools, or novelties. Europeans can compete with Americans in cheapness, but no one has equalled us, or will be likely to do so, in factory refinements.

The need for American ships to transport American products has not yet become a commercial ideal with us. Until that time comes our goods will continue to be taxed with higher freight rates than Europe pays. The tonnage assembles where commerce is most active and commerce above all things has a habit of moving along the lines of least resistance.

If the American genius for organization, already demonstrated in the domestic field, is really about to be concentrated on the extension of oversea trade, many existing obstacles will be removed. The courage of our industrial leaders and the common sense of the people at large warrant such a prophecy. Sacrifices must be made, but these have no terrors. Notwithstanding our limited experiences, we have already learned that, in the game of world commerce, psychology plays a part almost equal to that of economics.

BOOK DEPARTMENT

COUNTY GOVERNMENT

For the first time within the memory of civilized man, county government was made the subject of a state-wide conference, at Schenectady, N. Y., November 14-15, 1914. The proceedings of this conference have just been published and comprise some dozen addresses by specially qualified men on various phases of county administration, and proposals for its reform. All the speakers agreed that county government, at least in New York state, was a proper subject for treatment at the hands of the constitutional convention to the end that administrative responsibility and more effective popular control might be established.

Among the subjects treated at this conference were county audit, county charities, county courts, tax administration and county constabulary. Copies of this pamphlet may be had by addressing the writer at 381 Fourth Ave., New York.

County government as a field of critical and constructive study has been opened up in a number of political science magazines. Among this number may be counted the January number of *Political Science Quarterly*, directed particularly to the needs of the New York constitutional convention, and the August, 1914, number of *The American Political Science Review*.

A number of organizations in different parts of the country are, from time to time, making important contributions to the subject. The Tax Association of Alameda County, 803 Oakland Bank of Savings Building, Oakland, Cal., the Citizens Federation of Hudson County, 537 Summit Ave., Jersey City, the Bureau of Public Efficiency, 315 Plymouth Court, Chicago, the Westchester County Research Bureau at White Plains, the Civic League of Cleveland and the National Short Ballot Organization, 381 Fourth Ave., New York, have produced studies of various county offices, methods and forms of organization. The relation of county government to charities and corrections has been detailed from time to time in the *Survey*.

The only book on the whole subject to date is the volume of *THE ANNALS* for May, 1913.

H. S. GILBERTSON
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NOTES

BÖHM-BAWERK, EUGEN VON. *Kapital und Kapitalzins*. Pp. xxxv, 747. Price, M. 18. Innsbruck: Verlag-Abteilung der Wagner'schen k. k. Universitäts-Buchhandlung, 1914.

The original editions of this monumental treatise appeared in 1884. Most Americans know it in English translation. A second edition appeared in 1900.

This gave attention to aspects of current economic theory. The present, final edition brings the discussion down to date. Much of this is controversial in tone; but in the discussion of individual views, Böhm-Bawerk never forgets that he is writing a *history* of interest theories.

BRINTON, WILLARD C. *Graphic Methods for Presenting Facts*. Pp. xii, 371. Price, \$4.00. New York: Engineering Magazine, 1914.

This book was written with the idea of furnishing a handbook of graphic statistics for the use of persons who may not have had technical training in statistics, but who constantly have need of correct methods of presenting data in graphic form. It is so arranged that the substance of the book may be obtained by examination of the illustrations and titles without reference to the text. Brief criticism is offered in the subtitles and a fuller criticism in the main text. This is the first volume which has been devoted exclusively to the field of graphic presentation and the results are well worth the attention of students of statistics.

COLSON, M. *Railway Rates and Traffic*. Translated from *Transports et Tarifs* (3d Ed. 1907) Ed. by Charles Travis. Pp. viii, 195. London: G. Bell and Sons, Ltd., 1914.

One of the standard works on railroad traffic and rates is Mr. C. Colson's *Transports et Tarifs*, the first edition of which was issued in 1892. This is a translation by Messrs. Charles Travis, L. R. Christie and G. Leedam of portions of the third edition which was issued in 1907, thereby making it more readily available in English-speaking countries. Part I, which deals with the economic considerations determining freight charges, although based upon the French viewpoint, contains a clear statement of rate principles very similar to those which have long been expounded by the traffic men of American railroads. Parts II and III contain a description of freight rates in France, Great Britain, the United States, Germany, Austria-Hungary and Belgium. Part IV contains Mr. Colson's general conclusions.

CROCE, BENEDETTO. *Historical Materialism and the Economics of Karl Marx*. Pp. xxiii, 188. Price, \$1.25. New York: The Macmillan Company, 1914.

It is the purpose of these essays to disentangle the true from the false in the discussion of Marxism. Croce is a critical Hegelian, and because of this Hegelian background, he is able to solve many difficulties in Marx arising out of his relation to Hegel. Croce reaches the conclusion that Marx was an economist and not a moralist, and that the moral judgments of socialists are quite distinct from any scientific examination of economic processes. As for the labor exploitation theory, Croce shows that after the elimination of private capital, which can be collectivised, there still remain obstinate individual differences of ability which cannot be collectivised. A monopoly element of this sort is likely to be a permanent one under any scheme of social organization.

DAWSON, WILLIAM H. *Municipal Life and Government in Germany*. Pp. xvi, 507. Price, \$3.75. New York: Longmans, Green and Company, 1914.

DRYSDALE, C. V. *The Small Family System: Is It Injurious or Immoral?* Pp. 119. Price, \$1.00. New York: B. W. Huebsch, 1914.

The author has collected the evidence and made a strong defense of the voluntary limitation of the birth-rate. Contrary to public pronouncements on the subject, he finds clergymen and physicians uniting with public citizens generally not only in practicing but also in approving voluntary limitation of the size of families. Instead of considering it unhealthful or immoral, he regards it as the solution of the problems of poverty, sickness, crime and immorality. The book is a strong defense of neo-Malthusianism.

ELIOT, THOMAS D. *The Juvenile Court and the Community.* Pp. xv, 234. Price, \$1.25. New York: The Macmillan Company, 1914.

This book attempts to forecast the development of the juvenile court, and to analyze the proper functions of a community on behalf of its neglected children. The purpose of this analysis is to further progress toward a more logical and coherent juvenile court procedure.

The author has personally visited most of the leading juvenile courts of the country. He gives interesting and valuable facts about detention homes, police, politics, volunteers, clinics, and, in general, the present status of these several courts. For this reason, as well as for the statement of its main thesis, it is suggestive and timely.

FERRERO, GUGLIELMO. *Between the Old World and the New.* Pp. vii, 383. Price, \$2.50. New York: G. P. Putnam's Sons, 1914.

Though written earlier, this volume follows the publication in America of *Ancient Rome and Modern America* by the same author. In this the author presents in dialogue form the general theme, *viz.*, the conflict of ideals; the different concepts of progress, etc., between European and American civilization. His characters are both real and fictitious. His discussions cover a wide range of economic, social and philosophical subjects. The book is a most fascinating combination of the discussion of up-to-date ideas in an ancient literary form.

FURLONG, CHARLES W. *The Gateway to the Sahara* (New and Enlarged Edition). Pp. xxx, 363. Price \$2.00. New York: Charles Scribner's Sons, 1914.

This attractive account of Tripoli, first published in 1909, has been enlarged by the addition of two new chapters on the Italian Conquest. To the book that so well has described the physical features of this interesting land, the odd and fascinating customs of the people, its industries, commerce, and economic resources, is now added the latest events concerned with the Italian occupation. The changes that have been brought about by the process of colonization are described and the difficult problems Italy has to meet, if the colony is to be of economic value—problems of water supply, labor, agriculture, administration, etc.—are discussed.

GETTELL, R. G. *Problems in Political Evolution.* Pp. iv, 400. Price, \$2.00. Boston: Ginn and Company, 1914.

Not laying any claim to originality of subject matter, this work will prove valuable to readers who wish a general survey of some of the more important

problems of political science. Most of the topics discussed lie in the field of political theory, though by no means all involve primarily questions of political evolution. The authorities used cover a wide field and range far beyond those cited in the average elementary work on politics. There is no attempt, however, to make the treatment exhaustive, the author's intent evidently being to give only a general review based on the standard recognized authorities. In the use of references authors are mentioned only by surname and frequently though specific points are under discussion the citation is only the work without chapter or page. It is to be regretted that the volume contains no critical bibliography to guide the reader in further study in the fields covered.

GOLDER, F. A. *Russian Expansion on the Pacific, 1641-1850*. Pp. 368. Price, \$5.00. Cleveland: The Arthur H. Clark Company, 1914.

There are few fields more unexplored than the history of Russian expansion on the Pacific. Dr. Golder's study is based on original sources and presents a highly interesting account of a number of phases of this movement culminating in the voyages of Behring and the exploration of the Alaskan coast. Under analysis of the original documents the exploits of these pioneers lose much of their romance but nothing of their interest as examples of daring and hardihood. Most of the heroes become men of very ordinary and often brutal impulses. Plunder bulks larger than fame or devotion to the spread of the empire. There are some welcome exceptions among those whose interest in the expeditions was scientific rather than mercenary.

Those who are interested in the growth of the power of the Russian empire, especially in its effect on the early history of our outlying territory, Alaska, will find this monograph of decided value.

GRAHAM, STEPHEN. *With Poor Immigrants to America*. Pp. xviii, 306. Price, \$2.00. New York: The Macmillan Company, 1914.

This is a volume of tramp travel sketches of a journey made by the author from London to Chicago and is similar in character to a former work, *With the Russian Pilgrims to Jerusalem*. Only in the steerage of the giant Cunarder from London to New York is the story directly connected with immigrants. The description of the tramp from New York to Chicago is written in a most pleasing style and is filled with glimpses into American home life, industry, customs and ideals, with a charming mixture of the author's individual psychology. Incidentally, the "poor immigrant," and especially the Russian immigrant, figures in the narrative. Observations of American life by an Englishman are always interesting reading.

HOLLAND, A. W. *Germany*. Pp. viii, 312. Price, \$2.00. New York: The Macmillan Company, 1914.

Mr. Holland gives us a brief, readable sketch of the rise of the peoples now included in the German empire. The story ends abruptly with the Franco-Prussian war. Only about ten pages treat of the remarkable expansion of national life in the last forty-five years. While the volume gives a background on the

whole well-balanced, for a study of present-day Germany it lacks the interest which a book would have which discussed the life of our own generation. In a book intended to inform the general public on the development and position of a great modern nation, the neglect of present-day economic and political developments is hard to excuse.

HULME, E. M. *The Renaissance, The Protestant Revolution and the Catholic Reformation in Continental Europe*. Pp. 589. Price, \$2.50. New York: The Century Company, 1914.

This book, besides offering distinct attractions to all who are interested in the subject, should prove a valuable text for advanced college classes. Every important phase of development from the close of the thirteenth to the beginning of the sixteenth century, whether intellectual, religious, economic, political, or artistic, is carefully reviewed. Arrangement and proportion are excellent, the style is unpretentious and direct and the flow of ideas clear, while an abundance of interesting and well-selected detail pleasantly softens the outline. One wonders at times whether personal portraiture would not have contributed to the more exact explanation of complex personalities which the author clothes in ideas and actions alone; but so great and so admirable has been the work of condensation that little ground for complaint remains. From the teachers' point of view one must deprecate the absence of any bibliographical lists and of the occasional foot-notes which might have qualified such debatable statements as those concerning the attitude of Erasmus toward the church (p. 355) and his indifference to financial support (p. 221). That the author's obligations to his master are even greater than his dedication would lead one to assume has been pointed out elsewhere; and this inadvertence is the more to be regretted in that he has built with such marked skill upon the great foundations which he was fortunate enough to possess.

JAMES, HERMAN G. *Applied City Government*. Pp. viii, 105. Price, 75 cents. New York: Harper and Brothers, 1914.

A handbook on the principles and practices of city charter making, giving terse, pertinent discussions of the more important parts of charters, with a draft of a model charter provision for each of the subjects discussed. These subjects include powers, nomination methods (in which the author recommends the preferential ballot), the recall and direct legislation (for which the author feels that a petition of 35 per cent of the city's voters should be required), the form of government (essentially commission), the administrative officers, the city's finances, the budget and budgetary procedure, restrictions on bonds and franchises. Not all would agree with many of the recommendations, such, for instance, as that citizens should have "daily opportunities for hearings" on any matters in the budget in which they are interested during "a period of two weeks." All would probably agree that responsibility for the budget should be centered in the mayor, but in the average small city certainly daily hearings of two weeks' duration would scarcely be necessary. Franchises, says the author, as well as bond issues, should be subject to popular ratification. The volume is to be commended to all interested in practical charter-making.

JUDSON, KATHARINE B. (Compiled by). *Selected Articles on Government Ownership of Telegraph and Telephone*. Pp. xl, 204. Price, \$1.00. White Plains, N. Y.: The H. H. Wilson Company, 1914.

LEWIN, H. G. *British Railway System*. Pp. vii, 67. Price, \$1.00. New York: The Macmillan Company, 1914.

Mr. Lewin's book on the *British Railway System* contains an outline of the early development of British railways from their first beginnings to the year 1844. Its value lies principally in (1) its historical maps and discussion, and (2) its bearing upon the proposed nationalization of British railroads. Railroad nationalization in the absence of additional legislation is based upon an act of the year 1844 which empowered the state after the lapse of twenty-one years from date of charter to purchase any railroad constructed after the enactment of this law.

It is Mr. Lewin's purpose to show that numerous roads were chartered and built prior to 1844 and that "in the event of state purchases, the terms and arrangements with regard to these lines would have to be subject to entirely new legislation."

LOWELL, A. LAWRENCE. *The Governments of France, Italy and Germany*. Pp. vii, 217. Price, \$1.25. Cambridge: Harvard University Press, 1914.

A separate publication of several chapters of the standard work by President Lowell on the Governments and Parties of Continental Europe has been issued by the Harvard University Press. Some of the most important portions of the two volumes have been made available for general reading and regular class use. The chapters of the larger work, all selected from volume 1 of the series, are as follows: Chapter I, France: Institutions; Chapter II, France: Parties; Chapter III, Italy: Institutions; Chapter V, Germany: Structure of the Empire.

The recent work is a reprint of the original material with certain minor changes and modifications. Among these is the omission of approximately twenty-five pages relating to the history of political parties in the Third Republic. The note relating to administrative courts (pp. 59 and 60) has been revised and there is also a slight revision relative to the number and duration of French cabinets (pp. 127-128 original volume; 104-105 the revised copy).

It is to be regretted that President Lowell has not revised more completely the material contained in his very able presentation of European governments. The fact that this material can be reissued with so few changes shows in a marked degree the thoroughness and comprehensiveness with which the subject was covered in its original presentation and accounts for the fact that this work has since its appearance, remained the standard treatment of the governments and parties of Continental Europe.

MCCALL, SAMUEL W. *The Life of Thomas B. Reed*. Pp. xiii, 303. Price, \$3.00. Boston: Houghton, Mifflin Company, 1914.

The figure of Thomas Brackett Reed stands out above that of any other congressman of his time. It is unavoidable for this reason that any biography of

him should subordinate the treatment of the merits of public questions to a discussion of his course in dealing with them. This the author has done in a way both discriminating and interesting. Reed's work in shaping the practical processes of government stands out in bold relief throughout.

MORSE, EDWARD LIND (Ed. by). *Samuel F. B. Morse: His Letters and Journals*. Pp. xxxvi, 988. Price, \$7.50. Boston: Houghton, Mifflin Company, 1914.

An authoritative and well-balanced biography of the inventor of the telegraph, written by his son. The work abounds in extracts from letters, diaries and sketch-books that throw into clear relief the life of a man who would have been eminent in his day as a scientist and artist even if he had never attained fame as an inventor.

MUNRO W. B. *Selections from the Federalist*. Pp. vi, 202. Price, \$1.00. Cambridge: Harvard University Press, 1914.

Pertinent and typical excerpts from *The Federalist* on the dangers of disunion and the need of a strong federation; the inadequacy of the old confederation, and the difficulties encountered in framing the new constitution; the conformity of the new constitution to republican principles, and the justification of the military, diplomatic, commercial and other powers conferred upon the federal government; a comparison of the powers of federal and state governments; the system of checks and balances, including an examination of Montesquieu's Doctrine; the objection to a complete separation of powers, and the necessity for checks and balances.

The selections are chosen with judgment. The volume makes a splendid handbook for class-room and general use. In the introduction is a terse historical summary of the occasion for the letters and an estimate of their value.

PERRIS, GEORGE H. *The Industrial History of Modern England*. Pp. xix, 603. Price, \$2.00. New York: Henry Holt and Company, 1914.

This is not a dry recital of events, but an interpretation of the spirit of the economic history of Great Britain during the last one hundred and fifty years. The tone throughout is humanitarian. *Doctrinaire* political economy is assigned to the slag-heap, and a philosophy of social reform is made to appear in every chapter. "Unrestrained competition has proved a curse, not a blessing. . . . Society must be organized if the greatest good is to reach the greatest number."

PERRIS GEORGE H. *The War Traders*. Pp. viii, 168. Price, 1s. London: National Peace Council, 1914.

Mr. Perris presents in a series of brief chapters the evidence to show that the supplying of war materials has become internationalized. He shows that the armament trust has systematically set out to exaggerate the consciousness of nationalism and to stimulate the building of dreadnoughts and the outfitting of armies for defense, all of which plays into the hands of the trust which supplies

all parties with the instruments of destruction. War scares are hatched whenever contracts are needed, old "models" are rapidly replaced by newer and more destructive and powerful cannon and battleships while the common people pay the cost. These arguments are an illuminating supplement to the arguments presented in Mr. Norman Angel's *The Great Illusion*.

ROSENBLATT, BERNARD A. *The Social Commonwealth*. Pp. 189. Price, \$1.00. New York: Lincoln Publication Corporation, 37 E. 28th Street, 1914.

"Is it possible for us to construct new 'Cities of Refuge' for those thousands of honest workers who do not find a place in our cumbersome economic system?" With such a question in mind the author lays plans for a "labor commonwealth" where a haven of safety is offered. In addition he proposes an "industrial commonwealth" which will compete with present-day industries thereby decreasing the cost of necessaries and automatically fixing a maximum price for consumers. Coupling the two plans he establishes his "Social Commonwealth." The book is interesting in that it beams with the spirit of utopianism. The reader, however, is constantly in doubt as to whether our human kind ever can be shaped into the ideal moulds the author outlines.

ROYCE, JOSIAH. *War and Insurance*. Pp. xlviii, 96. Price, \$1.00. New York: The Macmillan Company, 1914.

STRUNSKY, ROSE. *Abraham Lincoln*. Pp. xxxv, 331. Price, \$2.25. New York: The Macmillan Company, 1914.

It has not been the purpose of the author of this book on Lincoln to discover new material, but rather to present Lincoln in a "new historical perspective." The author seems to have been impressed with the thought of Lincoln as a man rather than as a statesman or as the "great liberator." She has viewed Lincoln as "part and parcel of his class, the small homesteader, who claimed an equal opportunity in the virgin forests." It is doubtful whether much is to be gained by emphasizing the life and times of Lincoln before the debate between Lincoln and Douglas made Lincoln a national character. Nevertheless, the book is well done and on the whole well balanced. The criticism here made applies to the first third of the volume. In the latter two-thirds of the work, Lincoln's constructive statesmanship is presented in a clear and accurate manner.

TOWER, CHARLEMAGNE. *Essays Political and Historical*. Pp. 306. Price, \$1.50. Philadelphia: J. B. Lippincott Company, 1914.

Over half of this volume of essays is composed of studies of the operations of Cornwallis and Howe during the Revolutionary War. There is a very sketchy discussion of the relation of the United States to the arbitration movement and a well-balanced popular presentation of the development and importance of diplomacy as a profession. The treatment of the treaty obligations of the United States relating to the Panama Canal is too brief and categorical to give a proper appreciation of disputed points. A chapter on some modern developments of

international law emphasizes the protection of citizens abroad and the rules of the Declaration of Paris. The best discussion is that of the European attitude toward the Monroe Doctrine.

TREXLER, HARRISON ANTHONY. *Slavery in Missouri, 1804-1865*. Pp. viii, 259. Price, \$1.25. Baltimore: Johns Hopkins University Press, 1914.

This is another of the useful monographs from the careful researches of Johns Hopkins. The negro population increased steadily both by immigration and natural increase until in 1860 there were 3,572 free colored, 114,931 slaves as compared with 1,063,489 whites. As an economic factor, slavery was largely a domestic rather than a commercial system. The "slave before the law," though not always a chattel, had no property nor few other rights. The social status was about that of slaves in Virginia and Kentucky. There was considerable anti-slavery sentiment which made the slavery issue a cause of division in the churches and of a long bitter contention in politics. New light is thrown on Senator Benton's opposition to slavery and his political downfall as well as the part of Missourians in pushing "squatter sovereignty" through Congress and in trying to place Kansas and Nebraska in the slave column. A chapter on manumission, colonization and emancipation closes the discussion. A valuable bibliography, mainly of original material, is attached.

VECCHIO, GIORGIO DEL. (Translated by John Lisle.) *The Formal Bases of Law*. Pp. lvii, 412. Price \$4.50. Boston: Boston Book Company, 1914.

WICKWARE, FRANCIS G. (Ed.) *American Year Book for 1914*. Pp. xviii, 862. Price, \$3.00. New York: D. Appleton and Company, 1915.

WILLIAMS, EDWARD HUNTINGTON. *The Question of Alcohol*. Pp. 127. Price, 75 cents. New York: The Goodhue Company, 1914.

Dr. Williams discusses the "other side" of the alcohol question with a sanity and freedom from prejudice sure to be welcome to those who, like himself, have been appalled at the flood of unscientific literature on the subject. His book is a plea for the presentation of scientific truth about alcohol, and three of its five chapters are given to weighing and analyzing certain sweeping statements of "reformers" in regard to the relation of the use of alcohol to crime, insanity and disease. The author criticizes sharply the so-called "temperance instruction" given in our schools and shows that much of it is based on unverified conclusions and, through gross exaggeration, is apt to defeat its very purpose. In the chapter on *The Drug Habit Menace*, Dr. Williams shows that the use of habit-forming drugs is increasing at an alarming rate, especially among the illiterate negroes and whites of those states that have laws prohibiting the sale of liquor.

The conclusions the author arrives at are definitely constructive in character. He repeats the often-demonstrated fact that legislation proves of little value except as it is supported by the opinion of an intelligent majority in the community. He urges that we cease to regard the alcoholic as an offender, and advises that plans be made for the medical treatment of this as of other diseases. He

advocates the Scandinavian plan for grading the licenses for the sale of liquor and agrees that certain strict regulations should be enforced in regard to the sale to minors and drunkards. Most important of all, he believes that the municipality, aided by the churches, and philanthropic bodies, must provide counter attractions in the way of recreation centres, gymnasia, etc., that will in time crowd out the saloon. Certainly the book is thought-provocative and more than worth an hour's study.

WITHERS, HARTLEY. *Poverty and Waste*. Pp. ix, 180. Price, \$1.25. New York: E. P. Dutton and Company, 1914.

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AMERICAN WAGES

Previous volumes:

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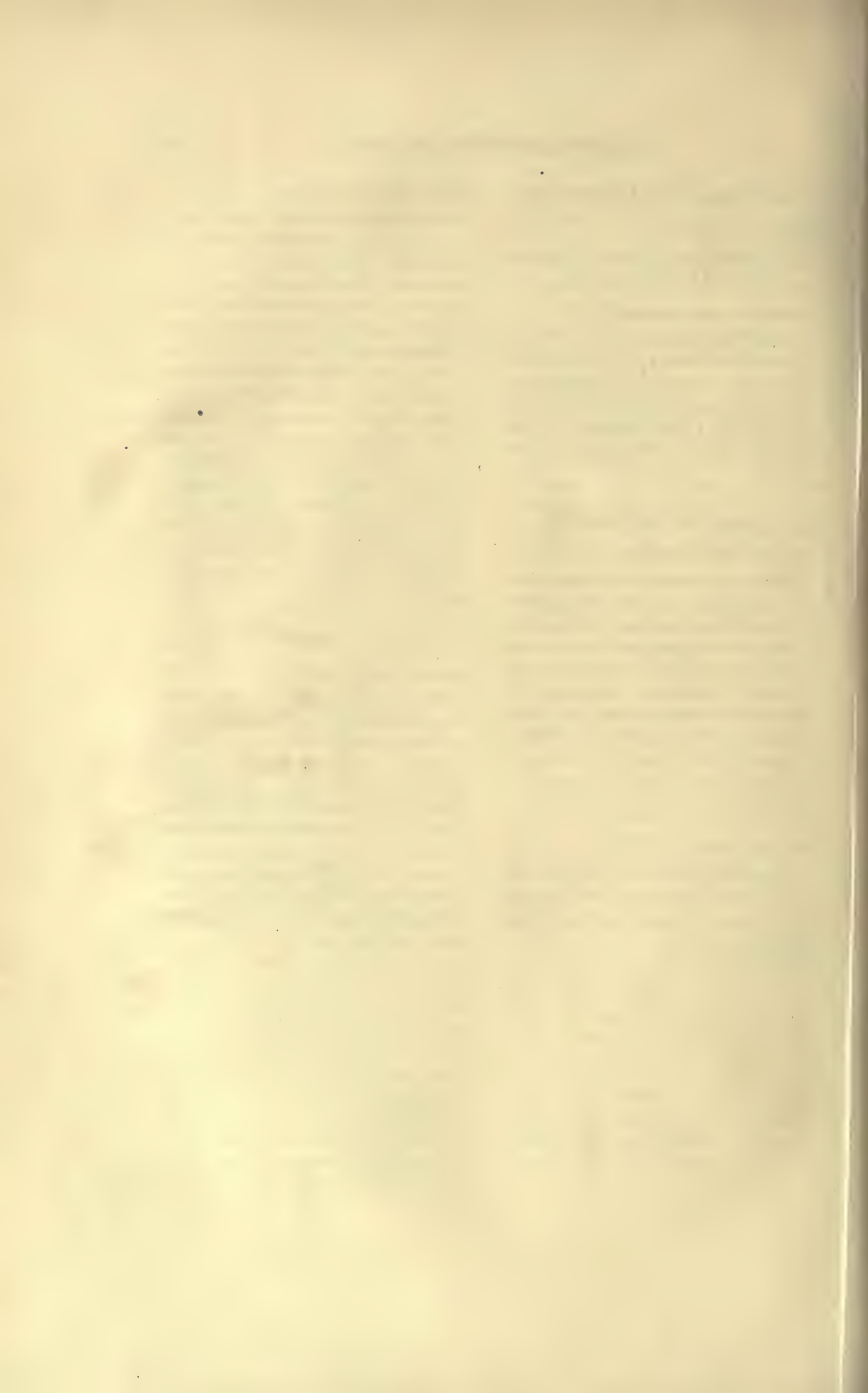
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THE TOTAL DISABILITY PROVISION
IN
AMERICAN LIFE INSURANCE
CONTRACTS

BY

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THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
1915

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INTRODUCTION

Life insurance constitutes the only safe method of protecting the family against the privations that may be occasioned by the untimely death of the breadwinner. Its function is to change uncertainty into certainty. Unfortunately, however, many life insurance contracts do not provide for relief in the event of the insured's total disability, and to this extent life insurance fails to perform its full mission in that it does not absolutely eliminate the element of uncertainty. That the risk involved is important is clearly demonstrated by Dr. Mudgett in the data which he presents. Thus, on the average, about six out of one hundred persons insured at age twenty-five become totally and permanently disabled during the following 38.8 years, the life expectancy at that age; while at age forty the corresponding probability amounts to nearly fifteen per cent and at age fifty to over twenty-six per cent.

We all know of instances where men with families depending upon them have been incapacitated from earning a living because they were the victims of accident, insanity, paralysis, tuberculosis, etc. Although amply supplied with life insurance, no special proceeds are available until death actually occurs, which may not be for years. In the meantime the disabled person may be a burden on his family and, economically speaking, as good as dead. Had he died the family would have received the face value of his insurance; but since he continues to live it may be necessary to sacrifice valuable insurance policies—and their value is now more apparent to him than ever before—because in the struggle to provide medical care and sustenance for himself and family it becomes impossible any longer to pay the required premiums. Under such circumstances, it is clear, the family stands in need of a special income to meet its increased burdens, instead of being obliged to use up what little surplus there might be in the struggle to keep the household going and to keep existing policies alive.

Situations like those referred to, it must be admitted, should be avoided, and any life insurance policy which does not provide substantial relief in the event of total disability does not fully perform

its function of changing uncertainty into certainty. In the writer's opinion it should be the mission of life insurance to grant such relief. Total disability clauses in life insurance policies constitute a perfectly proper and sensible provision. Endowment policies, having for their purpose provision against old age, and limited payment policies, providing for a cessation of premium payments in the later years of life, are sold by all the companies and have been warmly recommended in their literature. Why then is it not as reasonable to have life insurance policies provide for the cessation of premiums or the payment of the proceeds in installments when the insured becomes totally incapacitated, as it is to issue endowment and limited payment policies which aim to protect the insured against that period of life when his activity will naturally decline? Life insurance companies also pride themselves upon the liberality of their policies—that they provide days of grace in the payment of the premium, contain no restrictions as to residence, travel or occupation, and are incontestable for any reason whatsoever after one year from date of issue. Now, if it is reasonable to give assurance to the policyholder of the certainty of his protection along all these lines, why is it not reasonable to make the policy still more certain by including a comprehensive disability clause? Nor can it be argued that such action on the part of the regular life companies represents an unjust invasion of the field developed by accident and health companies. Accident and health policies, as issued in the United States, cannot be maintained at the option of the insured. They are written for short periods only and are subject to cancellation at the option of the company, while life insurance contracts afford the advantage of being unilateral in character and subject to termination only at the option of the insured.

As Dr. Mudgett explains, the growth of the total disability benefit in life insurance has been remarkably rapid during recent years. Although the benefit was practically unknown twenty years ago, considerably more than a majority of American companies grant the benefit today in one form or another. But upon a careful examination of the numerous disability clauses in use and the various problems that surround the particular risk, Dr. Mudgett reaches the conclusion that while some "have behind them the very best of careful and thoughtful consideration of the problems involved" many are imperfect or worthless and represent no other motive for

their issue than the furnishing of a "talking point" to meet competition. Dr. Mudgett has clearly shown, to quote his own words, "that the risk of total and permanent disability is a real and tangible one, and that its occurrence may easily endanger the permanence of one's insurance." It is to be hoped, therefore, that the numerous defective disability clauses now in use will be eliminated, and that all the companies will soon recognize the need of protecting their policyholders against the risk of total disability by incorporating in their contracts a liberal disability benefit.

Many of the companies now granting the benefit seem to proceed on the theory that it is good business to make the disability clause promise so little that it can be given free or at a nominal cost. This seems to the writer a most unfortunate attitude to take. If the risk involved is a real and substantial one it should be fully covered by the contract, and the company should charge, and has the right to charge, what the protection is worth. It is not intended here to describe in detail the nature of the numerous benefits now granted by the several companies because these are fully outlined by Dr. Mudgett. Suffice it to say that under the most satisfactory disability clauses now issued, the benefit, with comparatively few exceptions, consists of a waiver of premiums or the payment of the policy in ten or twenty installments. These benefits represent real assistance to a policyholder who is rendered incapable of earning a living. The waiver of premium benefit assures the maintenance of the policy; while the payment of the policy in installments furnishes a fund for providing medical care and sustenance for the disabled policyholder and his family.

But, as already stated, the family, in the event of the breadwinner's disability, stands in need of an especially large income to meet its increased burdens. For this reason the writer feels that the disability clause should provide, (1) for the payment of the policy in ten rather than twenty installments, and (2) in case of survival when the last payment has been made for a continuation of the installments throughout the disabled policyholder's life-time. The ten-installment plan is suggested instead of twenty payments because the latter, in order to furnish a substantial allowance, will require an amount of insurance larger than the average person feels able to carry. The continuous installment feature is suggested because it can be granted for a very small additional premium, the

average life of a person following total and permanent disability being said to be somewhat less than two years. Moreover, all disability clauses now in use define disability as "inability to perform the duties of any occupation for gain or profit." A strict application of this definition is not only apt to lead to disagreement between policyholder and company, but may in many cases fail to afford the relief which the dictates of justice hold to be valid. Rarely will a person be so disabled for any length of time as to be totally incapable of making some little income. But the real question is: Is the policyholder so incapacitated as to be rendered incapable of pursuing any longer his regular vocation; and, although still able to perform some sort of service in some new occupation, is he able to earn more than a mere fraction of his former income? The writer agrees with Dr. Mudgett's conclusion that disability should be defined by the companies with reference to the insured's particular occupation, as is now done by some accident and health policies.

S. S. HUEBNER.

University of Pennsylvania,
April 5, 1915.

PREFACE

The following study could not have been made without the cordial coöperation of life insurance companies and their officials throughout the United States. The author wishes gratefully to acknowledge his indebtedness to them for information furnished concerning the use of the disability clause and for copies of contracts including the clause. Especial acknowledgment is due to Mr. Arthur Hunter of the New York Life Insurance Company, Mr. Franklin B. Mead of the Lincoln National Life and Mr. Sidney H. Pipe of the Independent Order of Foresters for copies of their articles on the actuarial phases of disability insurance. Upon several occasions requests were made for advice and suggestions from Mr. Henry Moir and Mr. Miles M. Dawson and they invariably received a prompt response.

But greatest of all are my obligations to Professor Solomon S. Huebner, head of the Department of Insurance, University of Pennsylvania. To him belongs the credit of first suggesting a study of disability insurance and his advice and criticism were freely offered and generously given. He has read the proofs of the manuscript entire, and to his sympathetic criticism will be due, in large part, any credit that may attach to the present volume.

BRUCE D. MUDGETT.

University of Pennsylvania,
April 6, 1915.

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PART I

DISABILITY INSURANCE—HISTORICAL AND STATISTICAL

CHAPTER I

HISTORICAL DEVELOPMENT OF DISABILITY INSURANCE

The practice of granting insurance against total and permanent disability represents one of the latest innovations of American life insurance companies in the liberalizing of their contracts. On October 16, 1896, the Fidelity Mutual Life Insurance Company of Philadelphia issued the first policy of this kind on the life of its president. The movement toward the incorporation of the disability clause in life insurance contracts has spread with such rapidity that by January 1, 1912, at least 135 companies out of the 239 doing business in the United States granted a disability clause in some form.

Early Experiments with Disability Insurance

It is of interest, in view of the importance which this feature has recently assumed, briefly to trace its development. The first experiments with insurance against total and permanent disability¹ were made by mutual aid societies in connection with the insurance of miners in Germany and Austria in the eighteenth century. The need of such benefits was naturally manifested first among hazardous occupations such as mining. As Germany developed industrially during the nineteenth century, the movement spread to other classes of workers and many funds were established, particularly among railway corporations. Out of these isolated attempts on the part of private associations to solve the problem grew the German invalidity insurance law of 1889. This law was incorporated in 1911 with the national sickness and accident insurance laws of that country into a complete scheme of insurance against

¹ These historical notes have been taken largely from an article by Mr. Franklin B. Mead in the *Transactions of the Actuarial Society of America*, 11:304.

the most important industrial hazards. Governmental schemes of insurance against invalidity are now found in Austria, Belgium, France, Germany, Great Britain, Italy, Russia and Sweden.

In Great Britain sickness disability benefits, whether caused by disease or accident, have been granted by the Friendly Societies. The Friendly Societies have not attempted to distinguish permanent from partial disability. But the experience of these societies has been carefully analyzed by actuaries with reference to the duration of disability, so that there has resulted a considerable volume of data bearing upon what is known in the United States as total and permanent disability.

In America a number of trade unions have granted these benefits for many years, as have also the fraternal societies. In fact our best statistics regarding total and permanent disability are taken from the records of two of the larger fraternals.

Disability Insurance in Life Insurance Contracts

Disability insurance, incorporated in a life insurance contract, is a later development. The credit for this new departure likewise belongs to Germany, where such a contract was first issued in 1876. Thereafter it did not develop among the German companies with the rapidity shown at a later date in America. In 1900, out of 45 companies in the Empire, 17 were issuing it. Since 1900, however, most of the important companies in Germany have adopted the disability provision in one or both of two forms. First, in connection with regular life contracts, it is issued with limited payment life, endowment or straight term policies, the benefits granted being either waiver of premium or the maturity of the policy, to be paid in the form of an annuity of ten to twenty payments. The second form, the purchase of a life annuity, is granted as an independent contract and pays the insured an annuity from the time of disability until death. This latter contract may be paid for by a single premium or by periodic payments, each payment creating the right, after three years, to an annuity based on the age at which the payment is made. Under both forms the disability insurance ceases at age sixty-five.

The Russian companies issue an unusual type of policy including this clause. They will issue participating policies and then grant the insured, upon his relinquishing the right of participation,

the privilege of receiving invalidity insurance in lieu thereof. In case of disability, premiums cease and the policy matures, the insured receiving immediately a cash sum of fifty to seventy-five per cent of the sum insured, the remainder, if any, to be paid at death or at the end of the endowment period. The participating policy is loaded to the extent of about ten per cent of the non-participating premium, thus showing about what the benefit costs.

Development of Clauses Among American Companies

As already explained, the disability clause has been a part of the life contracts of American companies only since 1896, and at the time of writing there are, including two large Canadian companies which write insurance in the United States, 135 companies which grant the clause. The importance which this clause has assumed in the brief space of 16½ years can better be shown by comparing the relative amount of insurance represented by the companies granting it and by those which do not grant it. The Insurance Year Book shows that on January 1, 1912, the 239 companies of the United States had insurance in force (not including industrial business) to the amount of approximately \$14,500,000,000. Add to this the insurance of the two Canadian companies included in this study, and it gives a total of over \$14,800,000,000. Of this total insurance in force, the 135 companies granting the disability clause with their contracts had \$11,700,000,000, or approximately 79 per cent of all insurance in force by American companies. It is apparent that these figures are slightly unfair in including only two Canadian companies in the list; but this inquiry has not extended generally to Canadian companies granting the clause. By eliminating the two Canadian companies from the comparison, however, over 78 per cent remains. The following table shows the exact figures:

A. Total for 239 companies of United States (January 1, 1912,) (ordinary business) ..	\$14,577,131,497
B. Including 2 Canadian companies doing business in United States.....	229,026,360
C. Grand Total	\$14,806,157,857
D. Total of 135 companies granting disability clause (approximately).....	11,704,645,000

Proportion of "D" to "C"—79 per cent.

It is not desired to leave the impression that this eleven and three quarters billions of insurance represents the amount covered by the disability provision. It represents all the insurance in force by these one hundred and thirty-five companies and many of them refuse to apply the disability clause to old policies. Some companies have announced their intention of including old policies and some do so when requested but are not advertising the fact. It would be interesting to know just how much insurance is now covered by the new clause but it would be impossible to determine it at present without a personal canvass of all the companies concerned.

CHAPTER II

REASONS FOR AND OBJECTIONS TO THE DISABILITY CLAUSE

Motive of the Agent and the Company—Competition

The extraordinary growth in popular favor which the disability clause has shown justifies the belief that there are very good reasons for its existence. The reason for its adoption so generally may lie with the company, the agent or the policyholder. Of course the disability clause must ultimately be tested by its utility in serving the public interest as an insurance measure even though that may not be the immediate reason for its popularity. If a history of life insurance shall ever be written, certainly no more interesting phase of it will be found than the evolution of the life contract and the gradual liberalizing of its provisions. To take only a single instance, the granting of cash loans was bitterly opposed by a number of companies until they were forced either by statute law or by competition to grant such loans; then they reversed their position and, making a virtue of necessity, exploited their loan privileges to the limit of their advertising ability. This competitive struggle among life companies is always active and the wide-awake manager is always looking for some feature that will make an appeal to popular interest. Let us then look at the disability feature from the standpoint of the agent. The agent sells insurance by convincing his prospective customer that his company grants a better bargain than any other company on the market. To do this he *must have something to talk about* and any new feature which a number of keen competitors do not grant will tend to make his contract a good seller. There is no doubt that pressure from agents for a "selling feature" has induced many companies in the United States to make the disability clause a part of their contracts. This attitude on the part of the agent quickly reacts on the company. A great number of small companies have sprung up in recent years throughout the south and west and have written a considerable amount of their insurance in their immediate localities. Then they have extended their activities beyond the sphere of their local surroundings and have found that they must compete for

business. The appeal to patronize home companies which is of great value locally is of no avail when a company enters a new locality as a stranger. This is its opportunity to exploit a selling feature. But before long the larger companies, which solicit risks all over the United States, realize that the selling feature counts and they meet the competition of the smaller companies by introducing the new clause. The following figures bear out this statement. Of 135 companies issuing the disability clause 94 are small companies, each having on January 1, 1912, less than \$10,000,000 of risks on its books; twelve are large companies, each having over \$100,000,000 of insurance in force. These twelve began the granting of the disability clause as follows: one each in 1896, 1904, 1907, 1910 and 1911 respectively; three in 1912; one in 1913; while for three the information is not at hand. There is no doubt that competition has been a powerful weapon in the "progressive enlightenment" of these companies. The companies in question do not suffer by this statement, for their clauses are among the best.

A classification of the companies according to the year of organization shows even more certainly that these clauses were issued largely as a competitive measure. Of the 135 companies in question, 70 per cent have been organized since 1905, 78.6 per cent since 1901 and 21.4 per cent of them were organized previous to 1901. Is not this adequate proof that it is *the newer and smaller companies* which have taken up the new "selling feature" and that they have done it in order to meet competition?

Attitude of Officials of Companies

If statistical data are not sufficiently convincing, the attitude on the part of officials who have been frank enough to express their opinions will help in reaching a conclusion. An address was delivered September 6, 1912, before the American Life Convention at Chicago by Bascom H. Robison, President of the Bankers Reserve Life of Omaha, on "The Frills and Furbelows of Recent Years." He said in part, "It will be my pleasure to invite your attention to a few reflections concerning some of the trimmings which have been sewed on to policy contracts for purposes of ornamentation. . . . The average man . . . has a hazy notion that such things (real frills and furbelows) have to do with the ornamentation of the feminine gown. Without going into the subject deeply I find

that such things are *not essential to the main purpose of a gown*, their chief office being that of ornamentation; and everybody knows that ornaments are superficial things tacked on to an object for the sole purpose of attracting favorable notice. . . . We cannot associate such things with the true character of a policy contract, which must have real substance and *must be based upon enduring principles of equity and good conscience*. . . . *My opinion is that policy contracts of this description (i. e. designed to be attractive and to meet competition) are not only in the nature of a false lure but in some instances they threaten the perpetuity of the company issuing them.*"² The first example of ornamentation he cites is the total disability provision. Here is a frank admission that the disability clause has, in the minds of many insurance officials, no other purpose than that of ornamentation of the contract. It furnishes the talking point which the agent must have. If such be the case universally then the quicker we are done with this clause the better. Undoubtedly the speaker in the case referred to knew only too well the real nature of some of the clauses which have been adopted. The writer of the following probably had one of these "ornamental" clauses in mind: "There is a possibility for the said rider *appearing to the prospective applicant for insurance as more valuable than its actual cash worth.*"³ More direct in its implications is the next: "*As ordinarily framed, we do not believe there is any particular objection to including the feature in all kinds of policies, as in most instances its provisions are so specific as to make the liability of loss to the company very small.*"³ For brutal frankness in analyzing the clause of his own company, the following from a secretary-actuary eclipses them all and shows what is in the minds of too many officials when drawing up one of these clauses. He writes, "Is of no value to the insured practically. Is only another outlet for deception on the part of the agent. Merely a cheap selling feature. . . . We only use the rider in cases of competition. Is not a leader at all. . . . A law prohibiting it until more was definitely known as to equitable rates, etc., would be a good thing."

Motive of the Policyholder—Protection

If this has been the attitude of many companies which issue the disability clause, the question may well be asked, is there no

² The italics were not in the original.

³ Do.

further justification for its introduction into life contracts than its value as a talking point? If not, we can agree with this official that a law prohibiting it would be a good thing. But let the question be approached now from the point of view of the policyholder. Is there any great likelihood that the perpetuity of his policy will be endangered by the occurrence of the event against which the new clause insures? Is permanent and total disability a risk of any consequence to the average policyholder? It will be readily understood that the idea back of the clause is to prevent the lapsing of a policy and the loss of insurance by that *living death* which leaves a man in a helpless condition so far as concerns the continuation of his insurance, if he is dependent on the income from his daily work; and in a condition which from his own viewpoint justifies the *maturing* of his policy or at least justifies freeing him from the burden of further premium payments.

The Risk of Disability

Statistics again must be called upon to aid in the solution of this problem and fortunately we have them in the experience of fraternal societies in the United States which have insured against the risk of total and permanent disability. The scientific basis for determining rates for this risk will be discussed later but it is necessary here to call upon some of the tables that will then be considered. Three American actuaries, Messrs. Arthur Hunter, Sidney H. Pipe and Franklin B. Mead, have worked out, from the experience of the Foresters and the Maccabees, tables of disability and of mortality among disabled lives. It may be admitted that the risks of fraternal societies are not as good on the average as those of the old line companies, but absolute accuracy is not necessary and if these results will show the probability of becoming disabled to the average member of a fraternal society the purposes of the illustration will be served. These actuaries have each computed tables showing the yearly probability of becoming disabled. But it is desired here to know the total probability that a person will become so disabled and therefore be compelled to lapse his insurance. The following table has been arranged from Mr. Mead's probabilities based on the Maccabees by using the following method. The denominator of the probability fraction equals the number *living and not* disabled at the required age; the numerator equals the

number becoming disabled during the life expectancy of a person at the given age. These fractions are then reduced to decimal form. For example, at age 40, Mead's table, there are 77,864 persons living and active. The life expectancy of a person aged 40 is 28.18 years. The number of persons becoming disabled within 28 years from the beginning of age 40 according to Mr. Mead's data equals 10,969. To this was added eighteen-hundredths (.18) of the number disabled during the 68th year of age ($= .18 \times 2443 = 440$) giving the total number disabled during the life expectancy, or 10,969 plus 440 which equals 11,409. The entire probability of becoming totally and permanently disabled, it follows, to a person aged 40 is $\frac{11,409}{77,864}$ or .1466. The results from Mead's tables for every fifth year are as follows:

Probability of becoming disabled within life expectancy:

Age	
20.....	.0460
25.....	.0604
30.....	.0803
35.....	.1080
40.....	.1466
45.....	.1977
50.....	.2652
55.....	.3573
60.....	.4758
65.....	.6134
70.....	.7477

Since the computation of these tables entails considerable work, results have been worked out from Mead's tables only. But to show that the results are fair and that they do not favor the result expected, namely, a high rate of disability, more than do the tables of Hunter and Pipe, the following comparison may be of interest.

Out of the number living and active at age 20, being 92,637 for Mead's and Pipe's tables and 92,483 for Hunter's (the slight difference in the latter being because it was engrafted on the American Experience table at age 15 whereas the other two began at age 20) the three tables show the following total number disabled:

At age	Mead	Pipe	Hunter
30.....	208	337	471
35.....	414	630	717
40.....	600	955	999
45.....	895	1322	1360
50.....	1255	1897	1842
55.....	1798	2646	2528
60.....	3091	3861	3618

The comparison stops at 60 since Hunter's disability table does not extend beyond that age. The result shows that had either Hunter's or Pipe's tables been used a greater probability figure would have resulted.

If these figures are justified as an estimate of the chance that a man will become totally disabled within the average length of life, the question of insurance against the risk of total and permanent disability is a very important one and it behooves a man to consider whether he will add this protective feature and safeguard his insurance against possible lapse. True, the problem is somewhat minimized by the fact that only the man who is dependent on his current income to pay his insurance stands in the greatest danger from this risk. But this is equally true of all insurance and if only men took insurance whose families would be completely unprotected against death of the income-getter, there would be little insurance written.

This clause has become popular then because the company and the agent demand it for business reasons and because the policyholder needs it for economic reasons. The business argument has been largely at the base of its sudden popularity, but if the clause is to persist there must lie behind this the more fundamental interest of the policyholder. A close study of the clauses betrays the fact that some companies have left the policyholder out of consideration and have issued their disability contracts wholly with the idea of meeting competition.

Objections to the Disability Clause

The popularity of the clause has been attained despite a constant flood of criticism from the companies which are not issuing it. These objections should be noted briefly before taking up the more important study of the clauses themselves. Five important objections have been raised against this clause, namely: (1) that it is not life insurance and therefore should not be included in the life policy;

(2) that there is a very remote probability of a person becoming permanently or totally disabled and that only a short time elapses between disablement and death, and therefore there is little need for the clause; (3) that agents are given an opportunity to misrepresent the clause to the policyholder, thus opening the way to much dissatisfaction on the part of the policyholders in later years; (4) that it is difficult to define permanent and total disability to the satisfaction of both company and insured, making adjustment difficult and troublesome; and (5) that there is no scientific basis for determining the risk involved.

1. *Not Life Insurance*

As regards the first objection, namely, that the clause is not life insurance, the attitude of many companies is to the effect that if this type of risk is insured against, it should be covered by an accident or health company; that it is not the business of a life company, and that a combination of such unlike risks should be prohibited or discouraged. This objection disregards the fact that the occurrence of the contingency in question, namely permanent and total disability, puts the insured in just that position, where the permanence of his insurance is imperiled unless he is able to call upon some source of aid outside of his income, such as a savings deposit. It is quite true that this risk is covered *in part* by the clauses in many policies providing for automatic extended term insurance or automatic premium loans, and it is equally true that the companies are becoming increasingly liberal in the use made of these half-way measures. But if there is a real risk, the policyholder wants complete protection against it and such is not afforded by automatic premium loans. The objection here considered fails furthermore to note that accident and health companies do not give the insured the protection desired for they issue only one-year term policies and of course when they see the near approach of disability due to age or disease (and these constitute the great majority of cases) they will refuse to renew the policy and the insured is left without the very protection he wanted. Protection to the insured against this hazard must comprise *permanent* insurance against the possibility of permanent disability without the privilege of cancellation on the part of the company, and it is difficult to see where this will be obtained if not from the life companies.

2. Risk is Small and Interval Brief between Disability and Death

In answer to the second objection, namely, that the probability of becoming totally disabled is very remote and in case of its happening the time between disability and death is so short that an insurance against the risk is not needed, it is only necessary to offer the table on page 9 dealing with the probability of becoming disabled within one's life expectancy. This table shows that at age 35 one person in ten is liable to suffer total incapacity within his life expectancy, and that as the age increases, the probability of becoming disabled increases rapidly. At age 45, the probability has increased to one in five, at age 50 to one in four, at age 55 to one in three, at age 60 to one in two, and at age 70 to three in four. These figures make it appear that the risk of total disability is not an unimportant one. Moreover, the statement that only a short time intervenes between disability and death is untrue in many instances. We need only refer to the instances where persons lose both legs or arms, or become insane, or totally blind, or totally paralyzed, to appreciate the fact that one may live for many years after the occurrence of disability. While these cases are not important in the aggregate and do not mean a substantial addition, therefore, to the cost of the risk, the protection offered in such cases is of great importance to the individual who does not desire to face this uncertainty.

3. Misrepresentations by Agents

The third objection, namely, that the clause gives agents an opportunity to misrepresent facts and therefore may cause much dissatisfaction with the company in later years, is to some extent justified. Such dissatisfaction, however, will be great only in proportion as a company attempts to interpret its clause strictly. Insurance companies have passed through the same experience in the past with reference to many of the policy provisions which are now an inseparable part of the contract, and their failure to meet great dissatisfaction now, as compared with former years, is due largely to carefully drawn clauses and to a liberal interpretation on the part of the companies. If this liberality has become the established custom of the companies with regard to other features of their contracts, why fear that they will encounter more difficulties in connection with the disability clause? A study of the disability

clauses issued by American insurance companies shows that some have been drawn apparently for advertising purposes only, and are of very limited value indeed, furnishing ample justification for the fear that agents desiring to convince prospective clients may advertise such clauses as real disability protection, and that the policyholders will later, in time of need, find a discrepancy between promise and fulfilment. But it is apparent that this objection is directed, not against disability insurance as such, but merely at particular disability clauses, and the more quickly such criticism succeeds in eliminating these clauses from the field of competition, the better for all parties concerned.

4. Difficulty of Defining Disability

The fourth objection is in some respects similar to the one just discussed. The difficulty of determining what constitutes total and permanent disability is largely a question of wording and interpretation. In the first place, the clause should be so worded as to include within the scope of its benefits every legitimate case of permanent and total disability. A few companies unfortunately have attempted to restrict the definition of total disability in their clauses in such a manner as is bound to result in much quibbling if they insist on strict construction, and dissatisfaction will doubtless arise when policyholders have their attention called to the narrow limits of these definitions. Most of the clauses, however, are liberally worded, and in view of the past attitude of most American life insurance companies as to the liberal construction of contracts, there is little reason to anticipate difficulty with the clause. In the settlement of claims, many of the opponents of the clause fear that fraud on the part of the insured will assume large proportions. In the opinion of the actuaries of two of the larger companies issuing the clause, as expressed in letters to the writer, the attitude of the companies and their desire to be fair will go far toward minimizing the difficulties which may arise in the construction of the contract. Here undoubtedly lies the crux of the situation. There is little reason to see why fraud on the part of the insured will be a large element in this type of insurance, when companies today issue contracts against the risk of fire, or accidents to persons, or against burglary, cases where the element of fraud is sure to be greater than it will be with the disability clause. A company issuing this

clause should charge a premium high enough to justify liberality in the construction of its contract, and the contract should then be so construed.

The first two objections discussed bear primarily upon the statistical problem of the magnitude of the risk and its effect upon a life policy. There is little difficulty in showing that the risk is so considerable within the period of a person's expectancy of life that it may easily endanger the permanence of a man's life insurance protection. The last two objections cannot be advanced against disability insurance as such, but only in opposition to particular forms of clauses, or particular companies which seem to grant a disability benefit but qualify it with so many restrictions as to cause it to lose all semblance of its original purpose.

5. The Lack of Disability Statistics

The fifth objection to the adoption of the clause is more fundamental than any of the foregoing, and has reference to the absence of any scientific basis for the determination of the risk involved. The consideration of this objection requires a study of all the data dealing with the measurement of the risk in question and the application of those data to the clauses included in the present investigation. To this subject the next chapter is devoted.

CHAPTER III

MEASUREMENT OF THE RISK OF DISABILITY

Disability benefits have been granted by American life insurance companies only since 1896, and as noted before, 78 per cent of the clauses have been issued only since 1905. In this short time the companies have developed no experience of their own, and must look elsewhere for data to ascertain the risk involved. Permanent and total disability benefits as such have long been granted in Germany and Austria, and it was to this experience that American actuaries turned for data to measure the risk. The limits of this paper will permit no more than a cursory examination of the most important of these early data in their bearing upon the risk from the standpoint of American life insurance companies.

German Invalidity Tables

Permanent disability insurance began, as was stated, with the mutual aid societies organized by the miners of Austria and Germany and it was among these societies that the earliest statistical investigations were made. Among the tables published may be mentioned a table by Zeuner, showing the disability occurring among Saxon miners from 1860 to 1868 inclusive; the table by Caron including the experience of Prussian miners from 1870 to 1879; a table by Morgenbesser of the same data for the years 1868 to 1878; a table by Kaan dealing with Austrian miners from 1882 to 1890; and one by Küttner of Prussian coal miners from 1869 to 1883. Disability data for engineers and metal workers were published in a table by Zillmer in 1884. The investigation of experience among German railway employees was begun by Dr. Wiegand, who in 1868 completed the first inquiry into the rate of invalidity conducted on scientific principles. After the death of Dr. Wiegand these researches were continued until 1883 by Behm, after which they were carried still further by Zimmermann. Bentzien also published a table based on the years 1868 to 1889 dealing with invalidity among railway employees. A table for workmen in various trades was compiled by Behm in 1887, and this table is of special importance

TABLE 1
INVALIDITY PROBABILITY

Age	Railway employees										Miners				Engineers and Metal Workers	Workmen in Various Trades
	For the whole staff					For non-train staff					Prussian coal-mines	Prussian mines	Austrian Mines	Zillmer		
	1868-1873	1868-1884	1868-1873	1868-1884	1868-1889	—	1868-1884	1874-1878	1869-1883	1870-1879					1868-1878	1882-1890	1884	1887
	Behm	Zimmermann	Behm	Zimmermann	Karup Gotha	Behm	Zimmermann		Köttner	Caron	Morgenbesser					
20	.00052	.00031	.00022	.00021	.....	.00038	.00021	.00310	.00220	.00295	.....	.00037	.00100	.00019
25	.00117	.00118	.00053	.00072	.00072	.00044	.00054	.00120	.00320	.00373	.00259	.00038	.00132	.00038		
30	.00218	.00281	.00125	.00153	.....	.00084	.00096	.00550	.00600	.00472	.00421	.00215	.00183	.00076
35	.00342	.00447	.00212	.00284	.00287	.00172	.00220	.00890	.00900	.00754	.00787	.00362	.00267	.00152		
40	.00671	.00740	.00382	.00474	.....	.00326	.00382	.01860	.01650	.01278	.01383	.00652	.00410	.00305
45	.01005	.01129	.00662	.00811	.00910	.00662	.00698	.03580	.02460	.02332	.02219	.01130	.00663	.00609		
50	.01897	.02159	.01217	.01587	.....	.01272	.01375	.06960	.06650	.04335	.05104	.02076	.01128	.01218
55	.03568	.04163	.02317	.02935	.03190	.02558	.02687	.11060	.11200	.08056	.09566	.03953	.02023	.02437		
60	.06618	.07623	.03928	.05728	.....	.04651	.05427	.22800	.19710	.10331	.16729	.06709	.03815	.04873
65	.09765	.12207	.06763	.10002	.11740	.07426	.09752	.39500	.28660	.13249	.25823	.11564	.07571	.09747		
70	.15789	.18165	.10153	.16023	.....	.10633	.15781	.58280	.43230	.29989	.38294	.17330	.15814	.19493
75	.72022	.28962	.13806	.20704	.23010	.13782	.20617	1.00000	.58430	.50979	.61885	.22883	.39580	.38986		
80	.....	.....	.40255	.23134	.....	.25822	.23134	.....	.91470	1.00000	1.00000	.70291	.....	.77972

From T. E. Young: "The German Law of Insurance against Invalidity and Old Age." *Journal of the Institute of Actuaries*, 29: 306 (1891).
 Except columns 5 and 6, from C. W. Jackson: "Permanent Disability Benefits." *Transactions of the Actuarial Society of America*, 10: 490.

because it was used as a basis for the German invalidity and old age insurance law. The following data are of interest in showing the actual experience as compared with the expected according to Behm's table.⁴

Active workers one year under observation	49,981
Expected invalids (according to Behm)	218,589
Actual invalids	206

An investigation of invalidity at the time of the occupation census in 1882 showed a rate of invalidity much lower than Behm's table except at the earlier ages, hence his table was considered safe.

The yearly rates of probability of invalidity according to these several tables are here presented for each fifth year in a table compiled from the earliest account of this experience published in English.⁵ (Table 1.) The table by Bentzien for railway employees for the years from 1868 to 1889 and the table by Karup, used by the Gotha Life Insurance Company, a German company, have been added from another source.⁶

It is doubtful if any of these tables are of practical value in measuring the risk which confronts American companies. There is a question as to just what the term "invalidity" means, for the German tables are tables of *invalidity*; and invalidity may or may not have the same meaning as permanent and total disability in America. Moreover, the information as to the sources of the data and the methods of compilation is scant. The principal value of the tables consists in the fact that they indicate the general nature of the risk involved. As an actual measure of disability from the standpoint of American life insurance companies, it is probable that the German rates of disability are excessive. This view is generally accepted by American actuaries.

The first attempt to compute the cost of insurance against total disability from these rates of invalidity for the use of American companies was made by Mr. C. W. Jackson in an article on "Permanent Disability Benefits" published in the *Transactions of the Actuarial Society of America* for May, 1908 (10:490). Taking the rates of

⁴ *Journal Institute of Actuaries*, 29:307.

⁵ T. E. Young: "The German Law of Insurance Against Invalidity and Old Age." *Journal Institute of Actuaries*, 29:306 (1891).

⁶ C. W. Jackson: "Permanent Disability Benefits." *Transactions Actuarial Society of America*, 10:490.

invalidity among railway employees as calculated by Zimmermann and by Karup (Columns 4 and 6, table one; and columns 1 and 2, table two), Mr. Jackson combined each of these with the American Experience table rate of mortality and from them calculated the extra premium which must be charged by American life insurance companies for the promise that, on the occurrence of total and permanent disability, the premiums thereafter coming due on the policy will be paid by the company.

English Experience

Mr. Jackson, however, finds the above tables defective "in that the same rate of mortality is assumed for both invalid and active members, which is far from the case." He felt too, that the data from which the invalidity rates were obtained did not correspond to American conditions. For these reasons he looked elsewhere for statistics and found data in the sickness and mortality experience of the British Friendly Societies included in the British Government reports (Sutton's Tables) for the years 1861 to 1870. The reports for these years covered over 770,000 years of exposure and 24,445 deaths. Inasmuch as the experience of the Friendly Societies makes no distinction between permanent and temporary disability there was no direct method of determining the number of cases of permanent disability and Mr. Jackson followed the plan of considering all cases of over two years' duration as permanent. Mr. F. B. Mead in criticizing this approximation,⁷ explains that this method has been commonly used in arriving at rates of permanent disability among the Friendly Societies, and that, while some cases may be only temporary or partial, to balance these there are some who may have died before the end of the two years, and these latter cases would be considered totally and permanently disabled by American companies. From this experience, Mr. Jackson calculates (1) a table of mortality among Friendly Society risks, (2) rates of disability and (3) rates of mortality among disabled lives. The latter is of special importance in meeting the objection which Mr. Jackson had raised to his own tables, based on Karup's and Zimmermann's rates of invalidity. This paper by Mr. Jackson had an importance far beyond the bearing which his rates might have on the disability risks which American companies would

⁷ *Transactions Actuarial Society of America*, 11: 308.

incur, for it started in the Actuarial Society of America, the open forum of this country for the discussion of actuarial questions, a discussion of the disability clause which has brought permanent and substantial results.

American Experience

Since the applicability of both the German and the English rates to American conditions is doubtful, an attempt was next made to find American experience. American fraternal societies have long been accustomed to grant permanent disability benefits and the stock accident and health companies also do a large business of this kind. Nothing has been published thus far from the experience of these accident and health companies and it is doubtful if their experience would be of any value in measuring the risk for life companies. For these companies issue contracts of only one year duration and it is apparent that they will refuse to renew a policy on the life of a person, who, because of old age or disease, will probably soon become a claim. Data from such experience, therefore, would represent a highly selected class of risks and would not adequately measure the hazard confronting a company which insures for life. Several important studies have been made from the experience of the fraternal benefit orders and they furnish the best information at present available for the use of American life companies. The objection is urged against these studies that the experience of fraternal societies does not approximate the experience of life companies sufficiently to be of real value, and that therefore the companies cannot safely base conclusions thereon. But it is doubtful whether the representatives of the regular life companies in making this objection have not in mind, as a standard, the American Experience table and demand that, before accepting any disability table, they must have one which is as perfect as this one. It should be recalled that life insurance was written long before the adoption of the American Experience table, on the basis of data fully as tentative as the disability tables now to be discussed. Mr. Arthur Hunter,⁸ in discussing the acceptance by the state of New York of his own tables as a basis for the valuation of these disability policies, states that the approval of any legal basis of valuation should be temporary only and that fraternal experience can be used until

⁸ *Transactions Actuarial Society of America*, 12: 338.

data are obtainable from the life companies. The experience of the two fraternal societies which has been most largely used in this connection, namely, the Independent Order of the Foresters and the Knights of the Maccabees of the World is, in the opinion of the actuaries who have studied them in connection with the disability benefit, not greatly unlike that of the life companies. Mr. Sidney H. Pipe says, apropos of the care taken by the Foresters before granting the disability benefit,⁹ "The claimant on making application and being medically examined is immediately relieved from payment of premiums and is placed on a probationary list for six months. At the end of that period he is again examined and if the medical evidence is to the effect that the applicant is permanently disabled, the benefit is paid; if not, the probationary period is extended, or the applicant has to resume payment of premiums. The effect of this method is to eliminate, as far as possible, cases of temporary disability. In this experience such cases were rare and were not treated as cases of disability." Mr. Franklin B. Mead says of the Maccabees,¹⁰ "The opinion is widely current that the composition of fraternal societies is at wide variance with that of the life companies, but I am not so sure that that is the case, particularly insofar as a society like the Maccabees of the World is concerned, where each risk is carefully investigated and inspected before being subjected to a thorough examination which is passed upon by a competent medical board. Hazardous occupations are carefully eliminated and the society does not operate in unhealthful localities such as Arkansas, Louisiana, Mississippi, and similar districts without special action by the Board of Trustees. . . . Its total and permanent disability claims are rigidly passed upon on their merits after a probationary period of six months."

Pipe's Rates

Mr. Abb Landis has also made a study of the rates of disability found among the Maccabees and the Royal League. The Maccabees' experience¹¹ alone covered a period of 18 years ending

⁹ *Transactions Actuarial Society of America*, 11: 172.

¹⁰ *Supra*, 11: 309.

¹¹ Mead: *Measure of Risk and Liability under the Total and Permanent Disability Benefits in Life Insurance Policies*. Address delivered at the annual meeting of the American Life Convention, Cincinnati, Ohio, Oct. 8, 1909, page 5.

in 1902. It included 361,690 lives; 1,367,760 years of exposure; 8,460 deaths and 871 cases of disability. The data for the Royal League are not given in detail in the source quoted. Mr. Landis' tables, however, have not been used directly in computing disability premiums for American life companies. The first attempt to do this from fraternal experience was made by Mr. Sidney H. Pipe, his results appearing in the *Transactions of the Actuarial Society* for October, 1909 (11:172) shortly after the publication of Mr. Jackson's article. Mr. Pipe's study was based on data of the Independent Order of Foresters from the records of the society in the province of Ontario, Canada. He has computed the cost of the privilege of allowing cessation of premiums upon disability from a mortality and disability table arranged by combining the rate of disability and of death among disabled persons, according to the Foresters' experience, with the American Experience table of mortality. In this he follows the same method that Mr. Jackson applied to the data of the British Friendly Societies. The two rates of disability and of death among disabled lives can be compared by referring to tables two and three on pages 22 and 24 respectively. An attempt has been made in charts one and two, pages 26 and 27 to represent these same results graphically. One of the noteworthy results of Mr. Pipe's study is a table in which he analyzes the 1,229 deaths which the data includes to determine the effect of the cause of disability upon the subsequent rate of mortality. His table shows the average interval of time between disability and death, for all causes, to be one year, four months and twenty-eight days.¹² It shows that the rate of mortality among disabled persons is affected much less by age than by the cause or the fact of disability. Chart two will corroborate this statement.

Mead's Rates

The next study of fraternal experience with the disability benefit was made by Mr. Franklin B. Mead,¹³ using the data of the Knights of the Maccabees of the World. He used the same data as Mr. Landis, previously referred to, but his investigation extended further and included all the experience of the society from the date of its organization until October 1, 1909, a total of 2,927

¹² *Transactions Actuarial Society of America*, 11:178.

¹³ *Supra*, 11:304.

TABLE 2
INVALIDITY PROBABILITY

Age	Karup	Zimmermann	British Friendly Societies	Foresters	Maccabees	Foresters and Maccabees
		Ry. employees non-train staff	(males)			
	[Jackson]	[Jackson]	[Jackson]	[Pipe]	[Mead]	[Hunter]
	1	2	3	4	5	6
15						.000509
16						.000510
17						.000511
18				.00021		.000512
19				.00021		.000513
20	.00039	.00021	.00210	.00021	.00012	.000515
21	.00043	.00026	.00212	.00022	.00013	.000517
22	.00047	.00033	.00215	.00024	.00015	.000519
23	.00053	.00040	.00218	.00027	.00018	.000521
24	.00059	.00047	.00221	.00032	.00021	.000524
25	.00065	.00054	.00225	.00038	.00025	.000528
26	.00071	.00062	.00233	.00044	.00029	.000533
27	.00078	.00071	.00245	.00052	.00032	.000539
28	.00086	.00080	.00261	.00058	.00034	.000546
29	.00095	.00085	.00281	.00063	.00035	.000553
30	.00107	.00096	.00305	.00066	.00037	.000561
31	.00123	.00113	.00331	.00068	.00038	.000571
32	.00143	.00131	.00359	.00070	.00039	.000584
33	.00170	.00156	.00388	.00072	.00041	.000600
34	.00201	.00187	.00418	.00074	.00044	.000619
35	.00238	.00220	.00450	.00076	.00048	.000642
36	.00280	.00248	.00483	.00078	.00052	.000670
37	.00325	.00282	.00517	.00081	.00056	.000703
38	.00373	.00310	.00552	.00084	.00061	.000741
39	.00423	.00340	.00589	.00087	.00065	.000784
40	.00447	.00382	.00630	.00090	.00069	.000832
41	.00535	.00437	.00676	.00093	.00073	.000885
42	.00597	.00488	.00728	.00096	.00077	.000943
43	.00667	.00554	.00787	.00100	.00082	.001006
44	.00745	.00626	.00853	.00104	.00086	.001075
45	.00835	.00698	.00925	.00110	.00090	.001151
46	.00940	.00771	.01007	.00118	.00094	.001236
47	.01063	.00887	.01104	.00130	.00099	.001331
48	.01208	.01026	.01221	.00146	.00105	.001438
49	.01377	.01178	.01360	.00163	.00113	.001599
50	.01574	.01375	.01520	.00182	.00124	.001696
51	.01799	.01609	.01705	.00202	.00139	.001851
52	.02055	.01838	.01915	.00223	.00157	.002027
53	.02346	.02075	.02155	.00245	.00179	.002230
54	.02681	.02373	.02435	.00273	.00210	.002468
55	.03074	.02687	.02760	.00306	.00255	.002752
56	.03540	.03059	.03167	.00345	.00321	.003095

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INVALIDITY PROBABILITY—Continued

Age	Karup	Zimmermann	British Friendly Societies	Foresters	Maccabees	Foresters and Maccabees
		Ry.employees non-train staff	(males)			
	[Jackson]	[Jackson]	[Jackson]	[Pipe]	[Mead]	[Hunter]
	1	2	3	4	5	6
57	.04098	.03507	.03640	.00388	.00407	.003512
58	.04766	.04061	.04199	.00449	.00504	.004021
59	.05557	.04695	.04848	.00530	.00646	.004643
60	.06474	.05445	.05592	.00625	.00830	.005402
61	.07513	.06174	.06431	.00730	.01025	.006326
62	.08656	.07039	.07371	.00840	.01270	.007447
63	.09887	.07914	.08503	.00945	.01612	.008802
64	.11190	.08814	.10147	.01065	.02107	.010433
65	.12550	.09752	.12000	.01148	.02802	.012388
66	.13970	.10851	.14019	.01343	.03765	
67	.15460	.12009	.16286	.01801	.05043	
68	.16980	.13166	.18760	.02673	.06676	
69	.18510	.14479	.21395	.04107	.08394	
70	.20000	.15781	.24150	.06255	.11133	
71	.21410	.17085	.27150	.09266	.13936	
72	.22710	.18374	.30070	.13291	.16973	
73	.23020	.19246	.32895	.18480	.20189	
74	.25070	.19975	.35610	.24983	.23493	
75	.26140	.20617	.38200	.32950	.26920	
76	.27090	.21197	.40760	.42531	.31199	
77	.27850	.21730	.43104	.53876	.37192	
78	.28420	.22226	.45404	.67136	.47653	
79	.28940	.22692	.47600	.82461	.61873	
80	.29720	.23134	.49600	1.00000	.92776	
81	.31250	.23537	.51582			
82	.34100	.23922	.53175			
83	.38810	.24409	.54048			
84	.45850	.25046	.54175			
85	.55310	.25914	.53730			
86	.66610	.27164	.52536			
87	.78380	.29125	.51230			
88	.88790	.32641	.49784			
89	.96350	.40773	.48194			
90	1.00000	.80000	.46500			
91			.44400			
92			.42300			
93			.40200			
94			.38100			
95			.36000			

TABLE 3
MORTALITY PROBABILITY AMONG DISABLED LIVES

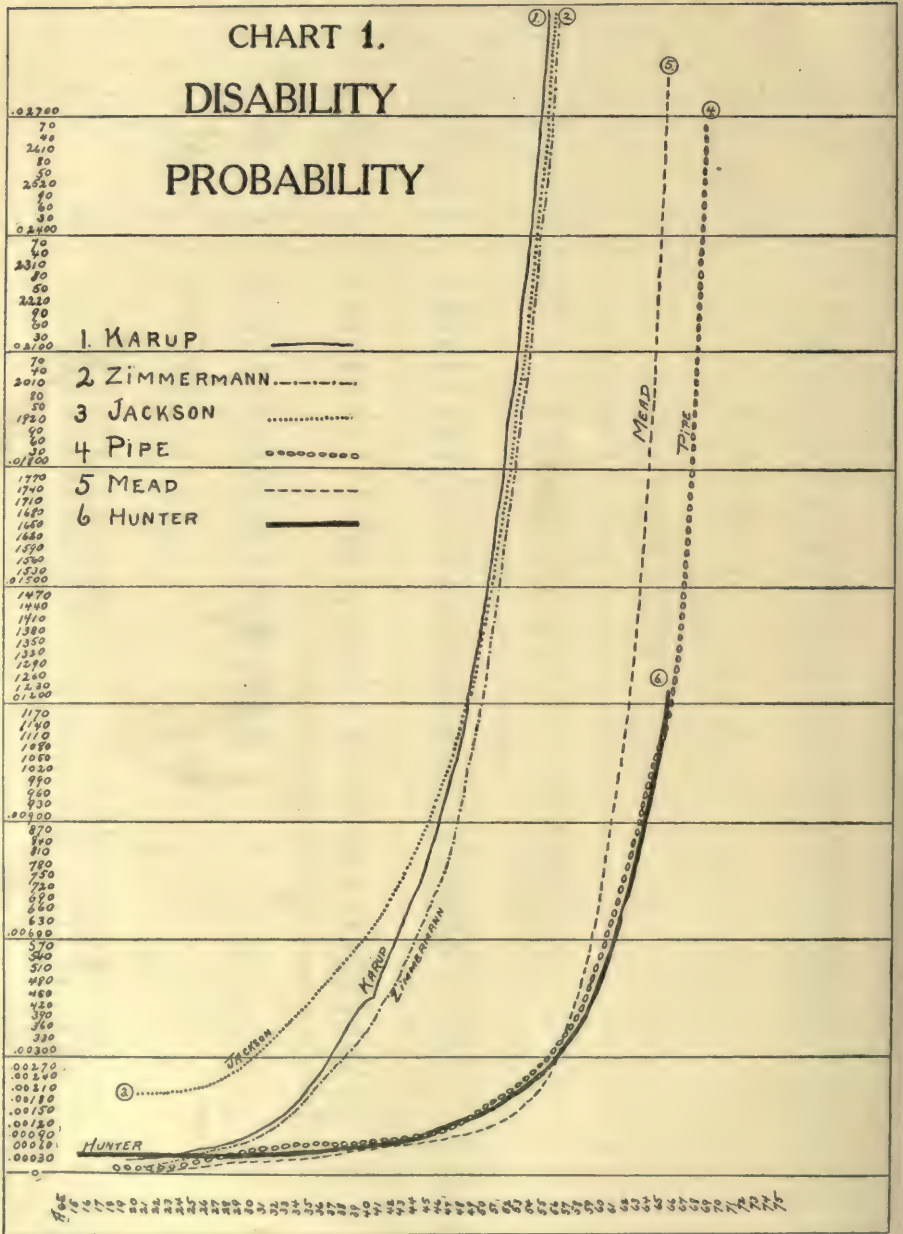
Age	Pensioned railway employees	Austrian miners	Upper Silesian miners	British Friendly Societies (males) [aggregate]	Foresters [aggregate]	Maccabees [aggregate]	Foresters and Maccabees [special aggregate]	American Experience table rate
	[Zimmermann]	[Kaan]	[Morgensbesser]	[Jackson]	[Pipe]	[Mead]	[Hunter]	[For comparison]
15							.267	.007634
16							.254	.007661
17							.241	.007688
18							.229	.007727
19							.217	.007765
20				.2695	.538	.4000	.205	.007805
21				.2375	.450	.3471	.193	.007855
22				.2059	.406	.3036	.182	.007906
23				.1905	.373	.2677	.171	.007958
24				.1770	.346	.2386	.161	.008011
25	.08310	.18807	.12655	.1670	.322	.2155	.151	.008065
26				.1595	.308	.1976	.141	.008130
27				.1530	.295	.1840	.132	.008197
28				.1480	.283	.1738	.123	.008264
29				.1425	.274	.1661	.114	.008345
30	.06560	.10339	.10959	.1370	.265	.1601	.106	.008427
31				.1320	.257	.1552	.100	.008510
32				.1265	.249	.1510	.095	.008607
33				.1210	.243	.1464	.092	.008718
34				.1145	.237	.1433	.090	.008831
35	.06390	.06559	.09490	.1090	.230	.1406	.089	.008946
36				.1040	.225	.1382	.088	.009089
37				.1005	.222	.1361	.088	.009234
38				.0970	.218	.1343	.087	.009408
39				.0945	.215	.1328	.086	.009586
40	.06220	.08663	.08328	.0925	.212	.1315	.085	.009794
41				.0910	.210	.1304	.085	.010008
42				.0890	.208	.1295	.085	.010252
43				.0875	.206	.1288	.086	.010517
44				.0865	.205	.1282	.086	.010829
45	.05300	.06624	.07244	.0860	.203	.1277	.087	.011163
46				.0850	.202	.1273	.088	.011562
47				.0845	.202	.1270	.088	.012000
48				.0845	.201	.1268	.089	.012509
49				.0844	.200	.1267	.090	.013106
50	.05100	.06115	.06958	.0843	.199	.1267	.091	.013781
51				.0841	.199	.1267	.092	.014541
52				.0839	.198	.1267	.094	.015399
53				.0838	.196	.1268	.096	.016333
54				.0837	.195	.1268	.099	.017396
55	.04850	.05693	.05911	.0836	.194	.1268	.101	.018571
56				.0835	.192	.1269	.103	.019885
57				.0835	.190	.1269	.105	.021335
58				.0835	.187	.1270	.107	.022936

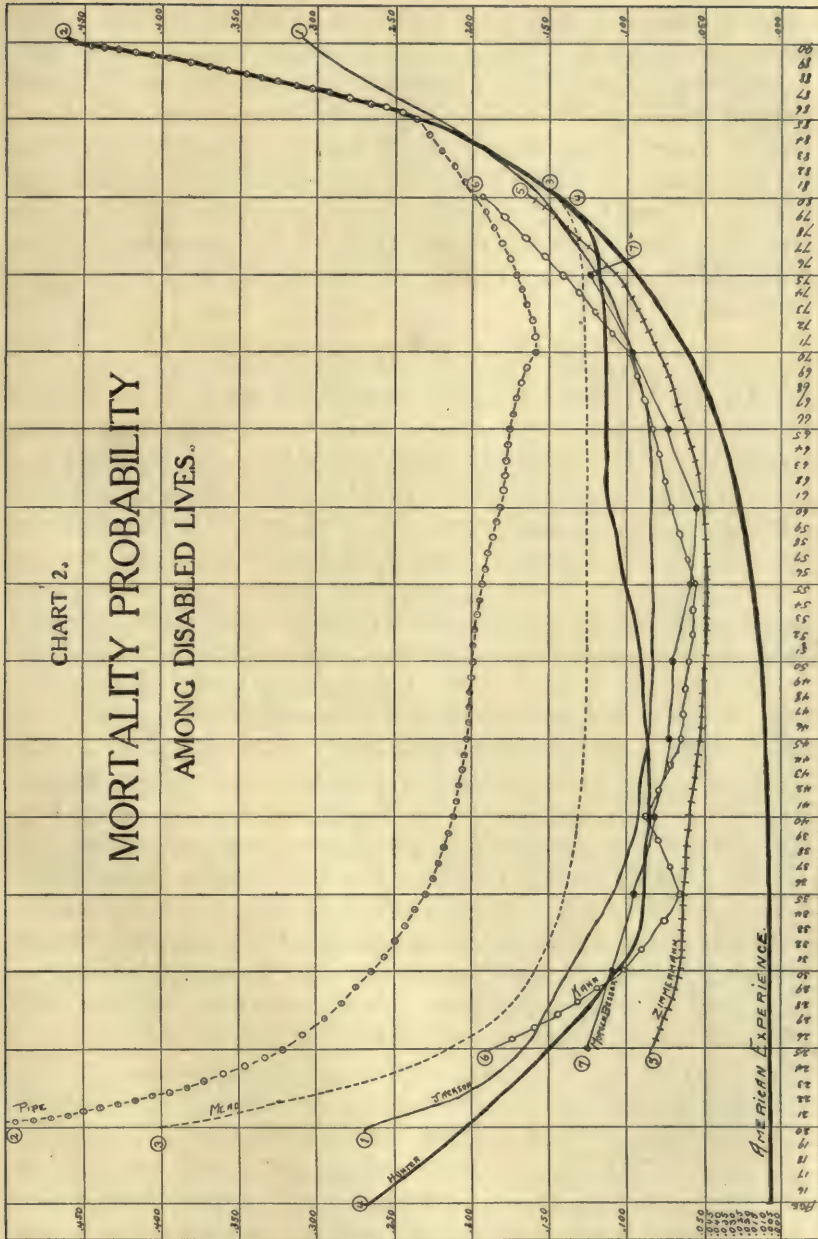
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MORTALITY PROBABILITY AMONG DISABLED LIVES—Continued

Age	Pensioned railway employees	Austrian miners	Upper Silesian miners	British Friendly Societies (males) [aggregate]	Foresters [aggregate]	Macca-bees [aggregate]	Foresters and Macca-bees [special aggregate]	American Experience table rate
	[Zimmermann]	[Kaan]	[Morgensbesser]	[Jackson]	[Pipe]	[Mead]	[Hunter]	[For comparison]
59				.0835	.184	.1270	.109	.024720
60	.05120	.07052	.05523	.0836	.182	.1270	.111	.026693
61				.0837	.180	.1270	.113	.028880
62				.0839	.179	.1271	.114	.031292
63				.0842	.178	.1271	.114	.033943
64				.0845	.177	.1272	.115	.036873
65	.06290	.08340	.07324	.0852	.176	.1272	.115	.040129
66				.0861	.174	.1273	.115	.043707
67				.0880	.172	.1273	.115	.047647
68				.0905	.169	.1274	.115	.052002
69				.0935	.165	.1275	.115	.056762
70	.07800	.09773	.09637	.0970	.160	.1276	.115	.061993
71				.1010	.160	.1278	.116	.067665
72				.1050	.162	.1281	.116	.073733
73				.1095	.165	.1285	.116	.080178
74				.1145	.168	.1290	.117	.087028
75	.10680	.14157	.12290	.1205	.172	.1297	.118	.094371
76				.1265	.176	.1307	.119	.102311
77				.1330	.181	.1322	.121	.111064
78				.1400	.186	.1346	.126	.120827
79				.1480	.192	.1385	.133	.131734
80	.16260	.19328		.1570	.198	.1445		.144466
81				.1670	.205			.158605
82				.1780	.212			.174297
83				.1910	.220			.191561
84				.2070	.228			.211359
85				.2240	.236			.235552
86				.2420	.266			.265681
87				.2600	.303			.303020
88				.2770	.347			.346692
89				.2925	.396			.395863
90				.3055	.455			.454545
91					.532			.532466
92					.634			.634259
93					.734			.734177
94					.857			.857143
95					1.000			1.000000

= Am. Exp. mortality after age 84





cases of permanent and total disability. In a later article in the same publication on "The Rate of Mortality among Totally and Permanently Disabled Lives Analyzed according to Duration since Time of Disability,"¹⁴ Mr. Mead made an investigation of the duration of time between disability and death and included data from the Knights of the Modern Maccabees embracing 245 invalids and 162 deaths, and from the Royal League embracing 1,972 invalids and 1,126 deaths, as well as the data of the Maccabees of the World, already referred to; a total experience of 5,144 invalids and 2,361 deaths.

McAdam's and Hunter's Rates

All the studies of disability made thus far have been based on the experience noted above. Mr. Arthur Hunter and Mr. Lucius McAdam* have both calculated tables. Mr. McAdam has used Mr. Mead's rates of disability and of mortality among disabled persons except for a slight correction from ages 69 to 80, and from them has computed premium rates both for the waiver of premium benefit and for the benefit of maturing the policy and paying it in installments, using for his purpose a different and simpler actuarial method than had previously been used. Into this actuarial problem it is not desired to enter here. Mr. Hunter's tables are generally credited among actuaries as being the best suited for measuring the risk involved. In fact they have already been made the basis for the valuation of policies with the disability clause in the state of New York. Mr. Hunter used for his purpose the data of the Forsters and the Maccabees which had previously been utilized by Messrs. Mead, Pipe and Landis. The difference in his treatment consists in the introduction of two "factors of safety." In the first place, he explains that net premiums should be calculated on an "ultimate" table of disability, that is, one from which the early policy years have been excluded. He presents the following table¹⁵ of experience of the first five policy years in support of his position:

¹⁴ *Vol. 12*, p. 75.

* Now deceased.

¹⁵ *Transactions Actuarial Society of America*, 12: 47.

DISABILITY EXPERIENCE OF FIRST FIVE POLICY YEARS MEASURED BY THE ULTIMATE RATE

Policy years	Expected number becoming disabled	Actual number becoming disabled	Ratio of actual to expected disabled
1.....	483	46	10 per cent
2.....	386	201	52 per cent
3.....	330	231	70 per cent
4.....	288	222	77 per cent
5.....	254	265	104 per cent

This table shows that the rate of disability among newly selected risks is much smaller than after a policyholder has been a member of the society for several years, the ratio of the actual to the expected rate of disability being only 10 per cent the first year after the policy has been written and not equalling the expected rate until after the fourth year of the life of the policy has been passed. The table therefore clearly demonstrates that from the standpoint of safety it is advisable to eliminate the experience of these first four policy years. The tables by Messrs. Mead and Pipe were "aggregate" tables, that is, they included in their data the experience of these early years.

The second "factor of safety" introduced by Mr. Hunter refers to the question whether, in dealing with the death rate among disabled persons, a "select," an "ultimate" or an "aggregate" table of mortality should be used. A "select" table would show the rate of mortality in its relation to the time elapsed since disablement has taken place. For instance, it would distinguish the death rate at age 40, among persons disabled at age 35, from the death rate at age 40 among persons disabled at age 39. In other words, it would show the effect upon the rate of mortality produced by the time which has elapsed since disability occurred, and it is composed of "select" rates of mortality for the several years immediately following disability. An "ultimate" death rate, like the "ultimate" disability rate first mentioned, eliminates these first years; in this case, the years immediately following the *occurrence of disability* and not, as in the case of "ultimate" disability, the years following the *writing of the policy*. The "aggregate" death rate represents the rate of death among disabled persons at each age regardless of

whether the experience includes mostly persons just disabled or those disabled for many years; and in computing it the complete data at hand for deaths at each age is included and no notice is taken of the duration of disability prior to death. Messrs. Mead and Pipe had used such an aggregate death rate. This is theoretically incorrect, because the death rate which will be experienced under the operation of the disability clause and which will determine how many premiums are to be paid by the insurance company is the death rate which results immediately after the occurrence of disability. An aggregate death rate, which, in the data for a particular year, does not note whether the data are of the first year after disability or of some other year; or an ultimate rate, which eliminates the first years after disability, are clearly incorrect. Mr. Hunter analyzed the data at his disposal to determine the "select" rate of death among disabled lives. The following table showing his results for each fifth year demonstrates that the rate of mortality is very high immediately after disability and decreases rapidly.¹⁶

RATES OF MORTALITY AMONG EACH 1,000 DISABLED LIVES

Policy years after disability	Ages				
	25	35	45	55	65
1.	400	327	290	248	190
2.	190	148	140	147	146
3.	134	99	106	119	127
4.	91	64	74	94	115
5.	73	47	51	74	106
6.	64	42	45	65	98
7.	56	37	39	59	93
8.	47	32	35	54	89
9.	40	28	31	52	85
10.	34	24	27	49	81

Mr. Hunter concluded, however, after having thus analyzed his data, that premiums based upon "select" death rates involved so much calculation as to be impractical and that an "aggregate" rate could be obtained which would be just as safe, by eliminating from the aggregate experience the deaths of the first policy year following

¹⁶ *Op. cit.*, p. 51.

disability. This he called his "special aggregate" mortality rate among disabled lives. He computed specimen premiums to compare these several rates, as follows:¹⁷

EXTRA NET ANNUAL PREMIUM, CEASING AT AGE 60, TO PROVIDE FOR CESSATION OF PREMIUM UNDER ORDINARY LIFE POLICIES ON THE INSURED'S BECOMING DISABLED BEFORE AGE 60

Age at entry	With aggregate mortality among disabled lives	With select mortality among disabled lives	With special aggregate mortality among disabled lives
20.....	\$0.11	\$0.12	\$0.13
40.....	.25	.29	.32
55.....	.93	1.03	1.12

These results bear out his conclusions that if "select" rates are safe, then "special aggregate" rates are equally so, for the latter rates show slightly higher premiums than the former. This is the same problem that Mr. Mead dealt with in his paper on "The Rate of Mortality amongst Totally and Permanently Disabled Lives Analyzed according to Duration of Time since Disability."¹⁸ A table is here presented arranged from Mr. Mead's data (*op. cit.* p. 79), whereby his results can be compared with those of Mr. Hunter as shown on page 30:

RATE OF MORTALITY AMONG EACH 1,000 DISABLED LIVES

Policy years after disability	Ages				
	25	35	45	55	65
1.....	399	367	306	262	195
2.....	190	168	148	142	129
3.....	108	89	104	116	116
4.....	54	58	78	89	104
5.....	43	45	65	80	100
6.....	34	35	58	75	99
7.....	27	29	54	73	99
8.....	20	22	51	75	102

¹⁷ *Op. cit.*, p. 57.

¹⁸ *Transactions of the Actuarial Society of America*, 12: 77.

TABLE 4
ORDINARY LIFE PREMIUMS
FOR CESSATION OF PREMIUMS UPON DISABILITY

Age	(1) Jackson	(2) Jackson	(3) Jackson	(4) Pipe	(5) Mead	(6) Mead	(7) Mead	(8) McAdam
	3½ per cent Karup invalidity Am. exp. mortality among disabled [aggregate]	3½ per cent Zimmermann invalidity Am. exp. mortality among disabled [aggregate]	3½ per cent B. F. S. males invalidity mortality among disabled [aggregate]	3½ per cent Foresters invalidity among disabled [aggregate]	3½ per cent Macabees invalidity Am. exp. mortality among disabled [aggregate]	3½ per cent Macabees invalidity mortality among disabled [aggregate]	3½ per cent Macabees invalidity Combined Am. fraternal mortality among disabled [select]	3½ per cent Mead's tables invalidity mortality
	Disability at any time	Disability at any time	Disability or age 80	Disability or age 80	Disability before age 80	Disability before age 80	Disability before age 80	Disability before age 81
20	1.30	1.15	.28	.24	.43	.31	.31	.32
25	1.92	1.70	.39	.34	.61	.45	.45	.46
30	2.89	2.55	.57	.48	.87	.65	.66	.67
35	4.52	3.98	.84	.71	1.29	.99	.99	1.02
40	7.41	6.47	1.30	1.10	1.99	1.55	1.55	1.60
45	12.79	11.04	2.08	1.79	3.21	2.54	2.53	2.63
50	23.70	20.19	3.46	3.10	5.55	4.44	4.41	4.63
55	48.56	40.31	5.99	5.69	10.46	8.41	8.32	8.79
60	115.29	90.67	10.78	11.38	21.66	16.85	17.29	18.38
65	341.58	240.15	19.89			41.27	40.66	
70			35.95			107.35	105.35	
75						262.27	248.92	

TABLE 5
ORDINARY LIFE PREMIUMS
FOR CESSATION OF PREMIUMS UPON DISABILITY OCCURRING BEFORE AGE 60

Age	Extra premiums payable during life if active						Extra premiums ceasing at 60		
	(1) Mead	(2) Mead	(3) Mead	(4) Pipe	(5) Hunter	(6) McAdam	(7) Mead	(8) Mead	(9) Hunter
	3½ per cent Maccabees invalidity Abt exp. mortality among disabled [aggregate]	3½ per cent Maccabees invalidity Maccabees mortality among disabled [aggregate]	3½ per cent Maccabees invalidity combined Am. fraternal mor- tality among disabled [select]	3½ per cent Foresters invalidity Foresters mortality among disabled [aggregate]	3½ per cent ultimate disability rate special aggregate mortality among disabled	3½ per cent Mead's tables (a) invalidity (b) mortality	3½ per cent Maccabees (a) invalidity (b) mortality among disabled [aggregate]	3½ per cent Maccabees invalidity combined Am. fraternal mor- tality among disabled [select]	3 per cent ultimate disability rate special aggregate mortality among disabled
20	.12	.05	.05	.05		.05	.05	.06	.10
25	.17	.06	.07	.07	.10	.07	.07	.08	.13
30	.22	.09	.10	.08		.10	.10	.11	.17
35	.28	.12	.13	.10		.15	.14	.16	.23
40	.37	.16	.18	.15	.22	.22	.21	.23	.32
45	.48	.22	.24	.20		.34	.32	.35	.46
50	.62	.30	.31	.27	.37	.57	.54	.57	.70
55	.73	.37	.37	.30		1.10	1.05	1.05	1.12

TABLE 6
 TWENTY PAYMENT-LIFE PREMIUMS
 FOR CESSATION OF PREMIUMS UPON DISABILITY OCCURRING BEFORE AGE 60

Age	Extra premiums payable throughout paying period, if active					Extra premiums ceasing at 80 in any event		
	(1) Fife	(2) Mead	(3) Mead	(4) Mead	(5) McAdam	(6) Mead	(7) Mead	(8) Hunter
	3½ per cent. Foresters (a) invalidity (b) mortality among disabled [aggregate]	3½ per cent Maccabees invalidity Am. Exp. mor- tality among disabled [aggregate]	3½ per cent Maccabees (a) invalidity (b) mortality among disabled [aggregate]	3½ per cent Maccabees invalidity Combined Am. Fraternal mor- tality among disabled [select]	3½ per cent Mead's tables (a) invalidity (b) mortality	3½ per cent Maccabees (a) invalidity (b) mortality among disabled [aggregate]	3½ per cent Maccabees invalidity Combined Am. Fraternal mor- tality among disabled [select]	3 per cent (a) ultimate dis- ability rate (b) special aggre- gave mortality among disabled
20	.08	.05	.02	.02	.08	.02	.02	.06
25	.03	.07	.04	.04	.04	.04	.04	.08
30	.04	.11	.06	.07	.07	.07	.07	.11
35	.04	.16	.09	.11	.10	.11	.11	.16
40	.09	.26	.16	.18	.17	.18	.18	.25
45	.18	.43	.25	.28	.33	.31	.33	.45
50	.29	.64	.37	.37	.60	.57	.58	.72
55	.32	.78	.42	.42	1.17	1.10	1.09	1.17

TABLE 7
 TWENTY YEAR ENDOWMENT PREMIUMS
 FOR CESSATION OF PREMIUMS UPON DEABILITY OCCURRING BEFORE AGE 60

Age	(1) * Mead	(2) * Mead	(3) * McAdam	(4) † Hunter
	3½ per cent Maccabees invalidity among disabled [aggregate]	3½ per cent Maccabees (a) invalidity among disabled [aggregate]	3½ per cent Mead's tables (a) invalidity (b) mortality	3 per cent (a) ultimate dis- ability rate (b) special aggre- gate mortality among disabled
20	.08	.04	.04	.11
25	.13	.06	.07	.13
30	.17	.09	.10	.17
35	.23	.13	.14	.23
40	.35	.21	.22	.33
45	.54	.31	.40	.54
50	.73	.42	.68	.81
55	.83	.46	1.24	1.24

* Extra premiums payable throughout premium paying period, if active.

† Extra premiums ceasing at age 60 in any event.

TABLE 8
PAYMENT OF SUM INSURED UPON DISABILITY

Age	Fackler		Mead		McAdam								
	(a) ultimate disability (b) special aggregate mortality among disabled	3 1/2 per cent Hunter's tables	20 installments i.e. \$736 if disabled	3 1/2 per cent Maccabees invalidity Am. Exp. mortality among disabled	20 installments i.e. \$736 if disabled	Disability before 60		Disability before 81		Disability before 60			
	Ordinary life	20 payment life	Age	O. L.	20 P. L.	20 End.	O. L.	20 P. L.	20 End.	Age	O. L.	20 P. L.	20 End.
20	.06	— .04*	20	.55	.22	.07	1.10	1.20	.08	20	.18	.21	.08
35	.19	— .05*	25	.75	.26	.11	1.46	1.49	.13	25	.23	.25	.13
50	.80	.65	30	1.01	.30	.15	1.95	1.85	.18	30	.29	.32	.18
			35	1.43	.33	.20	2.69	2.30	.25	35	.39	.38	.25
			40	2.11	.41	.23	3.82	2.91	.40	40	.53	.48	.40
			45	3.29	.64	.26	5.65	3.85	.84	45	.73	.72	.70
			50	5.56	1.69	.36	8.91	5.84	2.45	50	1.10	1.12	1.15
							15.21	11.36	8.36	55	1.91	1.90	2.00
							28.75	25.66	23.62	60			

* Less than regular Am. Exp. 3 1/2 per cent by this amount

Mr. Mead made a comparison of the two methods of treating the rate of mortality among disabled lives as here discussed, that is, as a select or as an aggregate rate, by computing the extra premiums for cessation of premiums upon disability, if happening before age 60, the extra premiums to cease at 60 in any event. In the first column (a) the Maccabees aggregate rate of mortality among disabled lives was combined with the American Experience table of mortality and the Maccabees probability of invalidity; while in column (b) the rate of mortality among disabled lives used was that of the Combined American Fraternal Experience analyzed in "select" form.

Age	Ordinary life	
	(a)	(b)
20.....	\$0.05	\$0.06
25.....	.07	.08
30.....	.10	.11
35.....	.14	.16
40.....	.21	.23
45.....	.32	.35
50.....	.54	.57
55.....	1.05	1.05

These rates, however, cannot be compared with those of Mr. Hunter, since they are computed on a $3\frac{1}{2}$ per cent interest basis, while Mr. Hunter used 3 per cent.

For the purpose of readily comparing the results which these several actuaries have reached, tables of the premiums which they have computed are presented herewith (tables 4 to 8 inclusive). An attempt has been made to aggregate the results in such a manner as to show the important differences in the tables. It will be noted, for example, that all computations, with the single exception of Mr. Hunter's, have been made on a $3\frac{1}{2}$ per cent interest basis. The tables indicate the source of the rate of invalidity used in each case and of the rate of mortality among disabled persons; and the nature of the latter, whether it is an "aggregate" or a "select" rate. Messrs. Hunter and Mead alone have attempted to use a select rate of mortality among disabled lives.

Table No. 4 shows the extra premiums required upon ordinary life policies for the benefit of waiving premiums at any time after disability occurs. Some of the tables, it will be noticed, provide for the cessation of premiums upon "disability or age 80" that is, the policy will become full paid at age 80 whether the insured is disabled or not. This makes the policy an endowment at age 80. Others provide for waiver of premiums upon "disability before age 80." The benefit in this case does not extend beyond age 80, but it is the opinion of Mr. McAdam¹⁹ that these rates can fairly be compared with the rates where no age limitation is made, for there are few instances where at age 80 the insured cannot be shown to be disabled in the sense of being "incapacitated to follow any work for profit." The rates shown in this table clearly demonstrate that, in case no age limitation is placed upon the granting of the waiver of premium benefit, it cannot be allowed without a substantial increase in premiums, especially at the later ages. The extra sums required at age 50 for example, range, according to the different tables based on American or English experience, all the way from \$3.10 to \$5.55 per \$1,000 insurance per year. In this fact undoubtedly lies the reason why so many companies have limited the benefit to age sixty.

Table No. 5 shows the extra sum to be added to the ordinary life premium in case the disability benefit is limited to ages prior to 60. Two methods have been followed by the actuaries in computing these premiums; one assuming that the extra premium for the disability benefit will continue throughout the premium-paying period if the insured survives and does not become disabled; the other assuming that the extra charges will cease when the age limit is reached (age 60 in table 5) whether disability has occurred or not. The specimen premiums are so grouped in this table that comparisons can be readily made between the rates computed by different actuaries. The two tables, 4 and 5, afford other valuable comparisons in connection with the problem as to what rate of death is to be expected among disabled lives. It will be remembered that Mr. Jackson in his Karup and Zimmermann tables assumed that the rate of mortality after disability would be the same as the American Experience table rate and computed his premiums accordingly, while in his Friendly Societies table he used the rate of mortality

¹⁹ *Total Disability Benefits*, p. 57.

that was found to occur among friendly society risks. Mr. Mead likewise in an early table²⁰ computed premiums based on the assumption that the American Experience rate of mortality would be experienced among disabled lives; but aside from these exceptions all the tables have used rates of mortality after disability, based on actual experience among disabled lives.

The effect of introducing this specialized rate of mortality is well shown by comparing Mr. Mead's rates in column 5, table 4, with his rates in column 6 of the same table. With the American Experience rate of mortality among disabled lives the cost at age 60 is \$21.66 per year; with the rate of mortality *among disabled lives* according to the Maccabees' experience the rate at the same age is \$16.85. Undoubtedly a considerable reason for the prohibitive size of the Karup and Zimmermann rates computed by Mr. Jackson is this use of the same rate of mortality among disabled as among active lives. The same results are well shown by comparing Mr. Mead's rates in table 5 column 1 with column 2. The effect of the introduction of "select" rates of mortality among disabled lives is shown by a comparison of Mr. Mead's rates in columns 7 and 8, or columns 2 and 3, of table 5. The premiums are slightly higher where the "select" rates have been used, 57 cents, for example, at age 50 as compared with 54 cents with aggregate rates of mortality. The combined effect of "ultimate" rates of disability and "select" (or "special aggregate") rates of mortality among disabled lives, the two contributions of Mr. Hunter, are shown by comparing his rate in column 5, table 5, with the rates of Messrs. Pipe or Mead in columns 2, 3, or 4 of the same table. These same results will be obtained by making similar comparisons of rates on twenty-payment life policies (table 6) and twenty-year endowment policies (table 7). A further noteworthy feature about the two latter tables is the fact that the extra benefit when attached to such policies costs so little as to be almost negligible, and has led many companies to grant the waiver of premium benefit without any additional premium.

It is impossible to obtain premiums to compare in cases where the benefit upon disability takes the form of maturity of the policy and its payment in some form to the insured. But three actuaries

²⁰ Mead: *The Measure of Risk and Liability under the Total and Permanent Disability Benefits in Life Insurance Policies*, Tables, G, H, and I.

have thus far computed premiums for this form of benefit, and their results are presented briefly in table 8. Mr. Fackler's premiums are based on Hunter's rates of disability and mortality; Mr. Mead's rates on his own earlier tables; and Mr. McAdam's rates on Mead's tables in which he used the American Experience rates for mortality among disabled lives. Messrs. Mead and Fackler have the same benefit in mind, namely, the payment of the policy in twenty installments following disability. This benefit has a present value, at the time when installments begin, of \$736 on a $3\frac{1}{2}$ per cent interest basis. Mr. Fackler's rates show that this benefit is less costly than the waiver of premium benefit in every instance given except the ordinary life rate at age 50 where the rate is 80 cents extra for payment of the policy in twenty installments and 70 cents for the waiver of premium. In the case of the twenty-payment life policy, the policy with this benefit attached actually costs less than the regular American Experience $3\frac{1}{2}$ per cent premium at ages 20 and 35. This is easily explainable. The policy matures for an equivalent of \$736 and this is a smaller sum than would be the present value of \$1,000 paid in a lump sum at death, were its present value worked out on the basis of the rate of mortality among disabled lives. At first glance it appears that Mr. Mead's tables lead to an entirely different conclusion, for they show that a considerable extra premium must be charged to cover this benefit. But if this table (the ordinary life column, for example) be compared with Mr. Mead's premiums for waiver of premium only on the ordinary life policy, (see table 4, column 5) it will be found that the result is the same, namely that the payment of the sum insured in twenty installments is cheaper for the company than mere cessation of premiums upon disability. Mr. McAdam's tables are calculated on the basis that the face value of the policy, \$1,000, will be paid immediately in one payment and therefore cannot be compared with Mead's and Fackler's premiums. These comparisons are mainly valuable because they lead to the conclusion that there is not a radical difference in the rates that have been computed by actuaries on any experience that is reasonably homogeneous. Mr. Hunter has stated²¹ that it is useless to attempt any further actuarial refinements until experience is available from the old line companies themselves.

The last objection brought against the disability clause was

²¹ *Transactions of the Actuarial Society of America*, 12: 50.

that there are not sufficiently accurate statistical data in existence on which to base rates. The foregoing studies by American actuaries, having in mind the application of the data to the business of old line life insurance companies, have overcome this objection and have furnished us with tables of rates which are generally agreed among actuaries to be safe.

PART II

THE DISABILITY CLAUSE AMONG AMERICAN LIFE INSURANCE COMPANIES

CHAPTER IV

RESTRICTIONS ON THE USE OF THE DISABILITY CLAUSE AS REGARDS POLICIES OR RISKS

The foregoing statistical study of disability insurance has been introductory to the main theme of this book, viz., a detailed study of the clauses issued by American life insurance companies. One hundred and forty-four companies organized on the old line plan, were found by the writer to have inserted the disability clause in some or all of their policies since 1896. Of these 144, seven have reinsured or been absorbed by other companies; one company has ceased issuing the disability clause; and one has ceased writing life business, now confining its attention to casualty insurance. This leaves 135 companies now issuing the clause. Copies of the clauses of 114 of these companies have been obtained from the companies and 13 other clauses were found in the Spectator Company's "Handy Guide" for 1911. Only eight companies, therefore, out of the total of 135 are not included in the following discussion.

The study of these clauses will include an analysis of the following features:

1. Policies or risks on which the clause is not granted.
2. Definition of disability.
3. Age and time limits to the application of the clause.
4. Benefits granted.

Term Insurance

Since the disability clause is in a more or less experimental stage, most companies have seen fit to restrict its use to those policies or those risks on which they expect to have a normal mortality experience. The case in which the clause is most frequently refused is in term insurance and various reasons are advanced in explanation. The reason given by the actuary of one of the larger companies for making this exception is that the reserves held under a term policy

are very small. It is true the risk in this case is much greater than in the later years of an endowment policy, for instance, because of the existence of a large reserve on the endowment policy, but this is no reason why the premiums charged should not consider the actual risk involved. This company charges a flat rate of only 25 cents for the clause.

The objection of many companies to including the clause in term policies is in direct line with their desire to discourage term insurance. It is a well known fact that most old line companies have for years worked on the assumption that the field for term insurance should be strictly limited, and that there are few situations which justify its issue. If it be granted that term policies are to be restricted to a few isolated cases where temporary business protection is demanded, then some force must be given to such reasoning. But there is a broader field of use for term insurance as pure protection against untimely death during the productive period of a man's life. It is not necessary to the safety of an insurance company that investment features be added to every type of policy. The gradual realization of this fact is making term insurance more popular with the insuring public and if this development continues, as it in all probability will, and if the disability clause becomes a standard provision in policy contracts, then there must be a corresponding demand for its inclusion in term policies. The question therefore of combining the disability rider with the term policy becomes a very important one.

Another and a more serious objection, however, is advanced against placing the clause in a term policy. Some term policies today allow renewal at the expiration of the term, or conversion to some other kind of policy, these privileges being granted without a new medical examination. The presence of the disability clause in a contract of this nature may well place the company at a disadvantage. Thus, in the case of a renewable policy if disability should occur shortly before the expiration of the term the company must pay the premiums for the remainder of the term, and the insured would be almost certain to renew the policy and thus oblige the company to pay the higher premium due after renewal. This appears on its face to be a very serious objection. It must be recognized that the cost of the clause on this policy should include the cost of paying the higher premium which applies after renewal.

If this is done the company can oppose no valid reason for making an exception in the case of renewable term insurance. That the objection is not a serious one, however, and that the cost would not be prohibitive is shown by a study of the rate of mortality among disabled persons as already explained. On page 21 it was shown that the average length of life after disability is only a few years at the utmost; that the company can usually proceed on the theory that a disability claim will very shortly be a death claim; and that, therefore, the extra cost of the feature as attached to renewable term policies will not be great. With convertible term policies, the case is different. Such policies might, after disability has occurred, be converted into short term endowments, thus obliging the company to pay the larger premium which the latter cost. By this means a policyholder might convert a term policy costing ten dollars per year into a ten-year endowment costing one hundred dollars per year and by the terms of his agreement compel the company to pay one-hundred-dollar premiums after disability in place of ten-dollar premiums. This would be equivalent to obtaining a ten-year endowment policy without paying for it. This is manifestly unfair, and a company writing participating insurance cannot treat its other policyholders fairly and allow such practices. The solution, however, lies, not in refusing to grant the disability clause on term policies, but in refusing to grant the waiver of premium benefit after conversion of the policy. Only one company has been found to have availed itself of this protective feature. The clause issued by the Columbian National on term policies reads: "Such payments (*i.e.* premiums by company) to cease, however, should the insured . . . avail himself of the exchange or renewal privileges of said policy." Other companies may contemplate a refusal to pay benefits after conversion, but the reservation of such right does not appear in the clause.

Endowment Policies

One company refuses to grant the clause with endowments. This action is difficult to understand, for a glance at the extra premiums to be charged for the clause as computed by the actuaries already referred to will show that there is generally no material difference between its cost on endowments and on ordinary life or limited payment life policies. If any policy tends to cost more

than others it is probably the ordinary life. Some companies recognize this fact by refusing to include the clause on ordinary life policies in case of certain hazardous risks. But there seems to be no particular reason for the application of such a limitation to endowment policies.

Joint Life Policies

It is frequently the case that the disability clause is not included in joint-life policies, the companies claiming that there is difficulty in calculating the benefits under two-life policies. The question immediately arises, for instance, whether the benefit will be paid when both are disabled or when only one. It is easy to see that the probability that both of two persons will become disabled is very small and that the benefit in this case would have little value. The Home Life of New York meets this difficulty by agreeing to waive one-half the joint-life premium in case one person is disabled or the whole premium where disability occurs to both. This is a simple and satisfactory solution. The Prudential Insurance Company grants the clause on joint-life policies on two lives, but refuses it on policies covering three or more lives. No fault can be found with this restriction, for such a benefit would be so small as to be insignificant. To be sure the cost of the clause when included in joint-life policies can be made dependent on paying the benefits for disability the same as death benefits. Death benefits, for example, are paid under the ordinary joint-life policy upon the death of either of the insured. It is possible likewise to pay the disability benefit under this policy in case of the *disability of either of the insured*. It is a question, however, whether this is not insisting on too great actuarial refinements at a time when our experience with disability insurance is limited; and whether the scheme of the Home Life is not equally satisfactory.

Some of the companies writing industrial business refuse to grant the clause in connection with intermediate policies, *i.e.*, policies with a face value of \$250 or \$500. This is in line with their reasons for refusing it altogether on any strictly industrial business, for a poorer class of risks is found among industrial policyholders.

Women

Chief among the risks which are ordinarily excluded from the benefits of the disability clause are women. Disability is usually so

defined as to mean inability to carry on any occupation for profit and since it is frequently the case that women have no occupation, many companies exclude them without exception. Other companies make exception only in case of married women and women who have no occupation.

Impaired Lives and Hazardous Occupations

Sub-standard lives insured under some lien plan, or under a policy different from the one applied for, cannot be granted disability protection under this clause without departing from a conservative basis, and a number of companies make this exception. To grant the clause in such a case would subject a company to a disability rate much above the normal, and it is well for the companies to follow the line of conservatism rather than assume so large a risk. Closely allied to this limitation are two other exceptions which are commonly made, viz.: (1) where the insured is engaged in some hazardous occupation, and (2) where a partial impairment of the life already exists. The reason for the first exception is obvious. As regards the second, if a person has already lost one hand, or foot, or has impaired sight, etc., it is apparent that the probability of becoming totally disabled is greater than in cases where no impairment exists. This defect furnishes a pretext on the part of a few companies for refusing entirely to grant disability protection. Such a sweeping denial of protection against those kinds of disability which are in no way affected by the fact of partial disability, as for example, impaired sight, is not necessary and is hardly fair to the insured. It should be sufficient merely to eliminate benefits in those cases affected by the partial impairment and allow the clause to cover all other causes. Some companies follow this procedure.

Few of the foregoing restrictions appear in the disability clauses themselves, but the companies reserve the right to withhold the feature or refuse to give the benefit at all. In some cases where the clause is a part of every policy it must be cancelled by endorsement; and many companies give their medical director full discretion to exclude it from any policy submitted to him. A number of companies, however, advertise that they make no restriction whatever as to the policy or the risk on which they will grant the disability clause.

CHAPTER V

THE DEFINITION OF DISABILITY

In discussing the objections to the disability clause it was found on page 13 that the companies feared difficulties would arise in deciding what constituted total and permanent disability within the meaning of the contract, and it was feared further that they would find it necessary to resist many unjust claims. This is forcibly stated by the president of one of the companies which does not issue the clause, in the following words:²² "A company . . . with a total disability clause in its contracts has, or will have a large number of claims which it cannot properly approve and allow. This leads to litigation, and litigation leads to expense, and worst of all to dissatisfaction. . . . One claim disallowed will more than offset in any agency all the benefits that can be gotten out of the total disability clause *as a talking point.*" This quotation clearly points the way toward the difficulties to be encountered in defining disability, when the company's point of view is "a talking point."

With Reference to Occupation

If the viewpoint here held is correct, any definition of disability should be broad enough to include any and all cases of total and permanent incapacity to perform the work that a man is fitted by his training to do. An injury to the fingers of a concert violinist, for instance, may totally incapacitate him thereafter from carrying on the duties of his profession and he is in this sense totally disabled. The same injury is of little consequence to a commercial salesman. Loss of speech on the other hand would mean to the latter inability thereafter to follow his profession but might scarcely affect the violinist. In the same way it might be shown that there are many injuries, diseases, or defects that have vastly different effects on the earning capacity of men in different occupations. If protection is to be obtained against the financial consequences of disability these different results must be considered in defining the

²² Frederick W. Jenkins in *The Security Agent*, March, 1913.

clause offering such protection. The usual form of definition requires that "the insured shall furnish due proof that he has become wholly and permanently disabled by bodily injury or disease, so that he is and will be permanently, continuously and wholly prevented thereby from performing *any work* for compensation or profit. . . . " This definition has the common fault of all disability clauses and furnishes grounds for serious criticism if the clause is to be interpreted literally. The situation cannot be better stated than was done in a circular which one prominent company sent to its agency force in explanation of the clause which it issues: "The disability must be total, not merely such as would preclude the insured from following his ordinary occupation, but such as would *permanently, continuously and wholly* prevent his performing *any work whatsoever* for compensation or profit, or from following *any gainful occupation whatsoever.*"²³ A literal interpretation of this statement leads to the conclusion that if the violinist had his fingers permanently injured so that he must give up his occupation, still he is not permanently disabled if it is possible for him to perform manual labor. Such clauses are not looking to the needs of the insured but are considering only the company and its desire for a "talking point." In spite of the fact that all of the clauses are stated in this objectionable way it is doubtful if all the companies intend to interpret them with such severity as the company here quoted has declared its intention of doing; for the impression obtained through correspondence with many companies concerning the disability clause is to the effect that it has in the past and will henceforth be liberally interpreted in any cases where deliberate fraud or dishonesty is not present. Some time must elapse before there will be a sufficient body of precedents, either voluntary on the part of the companies or through court decisions, to enable one to predict the force of the present definition of disability, restricted as it is with relation to the occupation of the insured. Liberal interpretation is therefore to be encouraged; but the insured can never feel safe until the contract clearly states that disability will be defined with reference to his particular occupation and not on the basis of his fitness to follow any gainful calling whatsoever.

²³ The italics are in the original.

With Reference to Cause of Disability

Disability may be defined as above with respect to its effect upon the occupation or profession of the insured or it may be considered with reference to the causes of disability. From the latter viewpoint the clause quoted above contains much that is commendable. It promises benefits for disability due to *bodily injury or disease*. That bodily injury and disease probably cover the majority of cases of disability is evident from a study of a very interesting table prepared by Mr. Sidney H. Pipe in an article already referred to.²⁴

Mr. Pipe analyzed 1,229 cases of death among disabled persons so as to show the duration of disability and the distribution of deaths by cause of disability and by age. The causes of disability and the relative frequency of the different causes are of particular interest for present purposes. The following facts are taken from Mr. Pipe's table.

Cause of disability	Number of cases per 1,000 total cases
1. Consumption	234.
2. Paralysis	127.8
3. Insanity	120.0
4. Diseases of the circulatory system	72.7
5. Diseases of the urinary system	52.9
6. Cancer	47.3
7. Injury	44.0
8. Balance	301.3

Bodily injury or disease therefore covers all cases with the possible exception of the last or miscellaneous group the composition of which is not known. One hundred and one companies using the clause define disability in this way. Over half this number (52 in all) further specify that they will consider as disability within the meaning of the clause "the entire and irrecoverable loss of the sight of both eyes, or the severance of both hands above the wrists, or of both feet above the ankles; or of one entire hand and one entire foot." These definitions lead one to believe that the companies using them probably intend to pay benefits in case of disability due to any legitimate cause not excepted in the policy.

It is doubtful whether the companies will include as reasons for paying benefits, deafness, dumbness or insanity. Deafness is

²⁴ *Transactions of the Actuarial Society of America*, 11:179.

specified by four companies; while the same four and, in addition, four more, name insanity or mental disorder as an accepted cause. No company has made any mention of dumbness and yet this is a contingency that the insured will certainly want to have covered. The preservation of the powers of speech and hearing are vitally important in many occupations and they should be included within the scope of any disability clause where affecting the occupation. Several companies of which the Prudential may be regarded as a type, agree to pay benefits upon the occurrence of disability *from any cause whatsoever*. There is left no doubt as to the scope of this clause.

Restricted Definitions

There are fifteen companies among the total of 127 investigated which have placed limitations upon the causes which will be acceptable for payment of benefits. Some of these limitations may be permissible but some cannot be allowed on any just grounds. The extreme "conservatism" shown in some of these definitions leads one to suspect that the companies were greatly in need of a selling feature and that they secured it in the guise of a supposed "disability" clause. Among the least objectionable of these limitations may be named the following:

1. *Disability due to voluntary acts of the insured not included.*
 - a. Disability must result from causes beyond control of the insured.
 - b. Bodily injuries must be "external, violent and accidental."
 - c. Disability must not be due to voluntary acts of the insured or to a defect or condition existing before the policy was taken out.
 - d. Disability must not be due to wilful or immoral acts on the part of the insured.
 - e. Disability must not be due to self-inflicted injuries.
 - f. Disability must not result from actual or attempted violation of the law.
 - g. Disability must not result from intoxication.
2. *Disability due to military or naval service in time of war not included.*

To these limitations there can be no serious objection. They will probably have the same history as have similar exceptions in the application of the regular benefits under life policies. Policy contracts once contained many restrictions as to travel, residence or occupation that are found in very few instances today.

The remaining companies to be considered have defined disability in such a way as clearly to indicate that their intention is to

provide a selling feature and not furnish disability insurance. For in each case the fact is plain that disability from certain causes only is insured against. Cases exist where clauses are issued covering "blindness, deafness and disease or mental disorder." Disability due to bodily injury is therefore not an accepted risk. Statistically this exception is not of great importance since the table above shows that 4.4 per cent only of disability is due to injury, and yet that 4.4 per cent may be of great importance to the individual. In the aggregate this figure may represent the proportion contributed by bodily injuries to all disability; but for the man who travels a great deal this contingency forms a much greater percentage of risk of disability to which he is subject. The company which makes an exception in the case of bodily injury has no right to compare its clause with that of a company insuring against disability "from any cause whatever." Three companies make their clauses applicable in case of accidental injuries but only in case there results *within 90 days of the accident* a loss of sight or the amputation of two limbs. Without the 90-day limitation the same feature is found in another clause. Two of these companies likewise exclude disability due to insanity or to disease complicated with insanity. This comprises 12 per cent of all cases according to Mr. Pipe's table quoted heretofore.

Assignments or Loans Not Permitted

In two cases benefits are promised upon disability of the insured only in case the policy "is still his unencumbered property." These companies insist on cancelling the clause upon an occurrence which can have no possible effect upon the risk incurred and therefore has no just relation to the disability clause. If any effect is produced it must be through an increase in moral hazard; and it is difficult to see how a loan on, or an assignment of, a policy will increase the moral hazard of disability. Some opponents have entertained grave fears for the success of disability insurance because of the existence of this supposedly personal element in the risk. Moral hazard, to be sure, exists in great measure in sickness insurance and malingering offers one of the greatest problems of the health company; but its influence upon *total* and *permanent* disability is not so clean-cut. There is danger that the disability may not be permanent but there is an easy way of caring for such a con-

tendency. Several companies have provided a commendable method of meeting this situation by requiring a probationary period of from six months to one year after disability before benefits will be paid, and if recovery takes place after this time has expired the "recovery" feature common to nearly every clause takes care of the situation. Moral hazard is indeed so small an element in disability insurance that it can well be disregarded and it does not furnish a valid reason for cancelling the clause after an assignment of, or loan upon, a policy.

Most objectionable of all limitations, however, are those making the clause applicable only in case of accidental injuries. The table of causes will show that 44 out of 1,000 cases, or 4.4 per cent of all disability, is due to accidental injury. The company, therefore, which grants benefits for disability due to accidents issues a clause which covers 4.4 per cent of the risk the policyholder incurs. Three companies issue clauses covering disability from accident or bodily injury only. Another has limited its clause to an even greater extent by making it apply only in case of physical disability due to loss of limb, total blindness or total paralysis. But the worst of these limitations is the following: "Injury through external, violent and accidental means *resulting in the severance of both hands, both feet, one hand and one foot, total loss of sight or one eye and one limb.*" In other words, not even *injury* will be compensated if it does not result in one of some half-dozen enumerated kinds of disability. These narrow restrictions are in no way compensated for by paying the full face value of the policy upon the occurrence of such disability, as is provided for by the three companies in question. One company grants the same benefit but introduces a further restriction by the requirement that such disability must occur *within 90 days of the accident*. Two clauses cover disability as thus defined but include, as well, "disability by bodily injury," being thus of slightly broader application. These clauses cannot be condemned in too scathing terms. No insurance commissioner should let the policyholders in his state suffer the imposition which the issue of such contracts implies; and a campaign of publicity should place them in such light before prospective policyholders that they will either be changed or be entirely done away with.

CHAPTER VI

AGE AND TIME LIMITS TO THE APPLICATION OF THE CLAUSE

The most carefully written clauses state the time when they come into operation, the circumstances under which they remain in force and the time when they cease to be effective, if at all. In the majority of cases these features are covered by the phraseology used in one of the two following instances: (1) "If the insured, while less than sixty years of age, after the first premium has been paid to the company on account of this policy, shall furnish due proof to the company while the policy is in full force and effect," that he is disabled; or (2) "If after one full annual premium shall have been paid under the above-mentioned policy before default in the payment of any subsequent premium, the insured shall, before attaining the age of sixty years, furnish proof of disability."

Beginning of the Risk

The three parts to each of these clauses, as stated above, are: First, a provision that it begins to operate only after the first premium has been paid; second, that it continues in force only so long as there is no default in the payment of a subsequent or renewal premium; and third, that it ceases to be effective in all cases after the insured has attained the age of sixty years. These three provisions form a part of sixty-one of the clauses studied. A number of clauses are different in detail only. Nine companies, for instance, require a preliminary period of one year, or the payment of two annual premiums on the policy, before the clause becomes effective, and in two cases three full annual premiums must be paid. These precautions may have been taken against a supposed moral hazard. At any rate they are not of an importance which requires that emphasis be given to them. Sixteen companies go no further than to state that the clause is maintained in full effect "while the policy is in force" and ten others make no specification at all with reference to the beginning of the risk.

Default in Premiums

The second feature referred to in connection with the parts of clauses here reproduced gains its importance from the fact that a default in premium payments, while it does not necessarily terminate the regular death or endowment benefits of the policy and in equitable contracts never does, may yet render the disability contract void. For, literally taken, it provides that the disability protection ceases the moment a default occurs in the payment of premiums. It is probable that most companies, with their known liberality in interpreting insurance contracts, would, upon the payment of defaulted premiums, consider the disability insurance to be again valid, and yet the insured wants to be certain of this. There are at least three instances in which this question of interpretation may arise and where its satisfactory solution will mean much to the insured: first, during the period of grace allowed for the payment of premiums; second, in cases where the policy allows automatic extended insurance upon default, with permission to repay the back premiums later or hold them as a lien against the policy, and to continue the insurance in force without the necessity for a new medical examination; and third, where the policy is surrendered for paid-up or extended term insurance. The latter case is of no concern of course, except where the benefit takes the form of maturity of the policy and its payment by some means to the insured, since the new policy issued after surrender or lapse is always paid-up. The question then is whether the company will allow the reinstatement of the disability protection under the same terms as the regular life insurance protection in case premiums have been defaulted and they are later paid up; or whether, in case the company permits thirty days grace in payment of premiums, or allows the reserve to be drawn upon to pay them at any time, it will consider the disability insurance in force during this time and pay benefits where disability occurs during this period in the same manner that it will hold itself liable to pay death benefits where death occurs within the same period. Ninety-six companies provide the protection in question at any time "*before* default in the payment of any subsequent or renewal premium." Strictly speaking, then, the great majority of the clauses do not give disability protection under the same policy conditions as the regular life benefits, for during or after the period of grace allowed in premium payments the disability insurance

lapses. Twenty-one companies state, more liberally, that the clause operates "while the policy is in full force and effect" or "during the continuance of the policy."

Cancellation by the Insured and by the Company

Closely associated with the matter of default in payment of premiums is a provision found in a number of contracts whereby the disability clause is automatically cancelled upon failure to pay the extra premium required for this benefit. Cancellation may be effected automatically in this way or by contractual agreement to allow the insured to discontinue the disability insurance at will. Cancellation in the latter sense does not arise of course, except where an extra premium has been charged for the disability protection; and the regular cancellation provision offers no difficulties in the majority of cases, merely permitting the insured, when he desires to discontinue his disability insurance, to have his premium reduced by the amount paid for the extra benefit. There are two companies, however, that give this privilege to the company as well as to the insured. One allows the clause to be cancelled by the insured *or by the company* "provided the insured is engaged in a more hazardous occupation than at the time of its (the policy's) issuance." The other states that "within the period of grace following any anniversary of this contract, the total disability benefit may be cancelled by either the insured *or the company*." Clearly, clauses of this nature are a travesty upon life insurance, a fundamental principle of which is to grant unilateral contracts that the company must maintain for so long as the insured will pay premiums. And undoubtedly one of the reasons for placing the disability clause in life policies is to grant *permanent* disability protection to the insured over a long period and not give the company the privilege, as is done in case of accident and health policies granting this protection, of refusing to continue the insurance at the close of any policy year. In the two cases referred to it can be assumed that in later years when the probability is very great that the insured may become totally disabled, due to disease or old age, and when the company sees that the insured is approaching such a condition of total disability, the company will at once exercise its option to cancel the clause and the insured will be deprived of this protection just when he is most in need of it.

Automatic cancellation provides for the cessation of disability protection upon failure to pay the *extra* premium charged for this benefit. It operates as an added restriction upon the term of the clause and produces like results to the provision regarding default in the payment of regular premiums. Its analysis throws further light on the question whether the disability protection is to be continued during the period of grace in premium payments. In the case of three companies, it is doubtful if this provision grants the regular grace in premium payments before the disability benefit would automatically cancel itself. The rider issued by one company in connection with its term policies reads: "Failure to pay any premiums *when due* will avoid this contract." Two clauses state that "non-payment of the additional premium in accordance with the above" will render the clause null and void; and another contract provides that "this rider is issued for the term of twelve months from date and may be renewed subject to all its conditions and privileges for successive terms of twelve months *by the payment of the premium in advance*." In one case, this requirement is indefinite but it would probably allow grace in premium payments. It states that "it will be automatically cancelled when premiums cease to be paid." In the case of six companies there is little question but the automatic cancellation feature will not apply until after the regular thirty days of grace has elapsed. For instance, "failure to pay the above premium or any premium or installment due on said policy *within the time allowed thereunder*, will render this rider null and void." One company provides in its clause that the payment of extra premiums for disability benefit is "subject in every respect to the same regulations and conditions" as the payment of regular premiums for the policy. A latitude of thirty days of grace before the clause can be cancelled is found in the case of three companies, in conjunction with the provision making the payment of the extra premiums a consideration for the contract. One clause reads, "In consideration of the payment of all premiums *in accordance with the terms*," of the policy. Another is issued "in consideration of the payment of the premium provided for in said policy *as the same becomes payable*"; the last one "in consideration of an additional premium of \$ which is to be paid *subject to the same conditions as to payment as the regular premium*." One clause leaves no doubt as

to the question under discussion by providing that the automatic cancellation shall take place upon "failure to pay the premium for this additional benefit *before the expiry of the days of grace.*"

Benefits During Premium Paying Period Only

The policies of twelve companies contain a peculiarly unjust provision limiting the benefits under the clause to the period during which premium payments are to be made. No difficulties will arise where the waiver of premiums is the only benefit granted upon the insured becoming disabled, but each of these twelve companies considers the policy matured when disability occurs and begins its payment in some form to the insured. It is as regards this "maturity" benefit that the limitation here considered becomes important. Some of these clauses have provisions as follows: (1) the installment benefit will be "null and void if any such disability occurs after the period for the payment of premiums hereon"; (2) benefits are "applicable only during the premium paying period of this contract"; (3) benefits are payable "during the continuance of this policy *and the payment of premiums hereon*"; (4) "total disability insurance is limited *to the number of years premiums are payable.*"

Limited Time for Proof of Disability

Another objectionable provision found in several clauses requires that proof of disability shall be made within three or four months of its occurrence, all benefits otherwise lapsing. This limitation usually takes the following form:

Immediately after the commencement of the total disability, full particulars thereof must be given in writing to the company at its home office together with the address and whereabouts of the insured; and within 120 days²⁶ after the commencement of the permanent total disability, there must be given satisfactory proof of permanent and total disability.

No suit on account of alleged permanent total disability shall be maintainable if commenced before the expiration of one year or after the expiration of two years from the date of the happening of the disability.

This feature is found, substantially as quoted, in the clauses of ten companies. Not all these companies include the limitation that suit cannot be brought at all after the expiration of two years. In its complete form this clause compels the insured to furnish proof

²⁶ In some cases 90 days.

of disability within the narrow limits of a few months upon pain of forfeiting all benefits, and further restrains him from bringing legal proceedings to obtain his rights under the policy except within a period of one year following a probationary period of 12 months. Disregarding the somewhat unimportant differences in detail between the clause quoted and those of the different companies in question the fact remains that in one and all they agree in placing limitations upon the benefits received merely because of failure to comply with technical requirements as to making proof; and these may happen in plenty of cases where there is no question as to the bona-fide character of the disability. The companies using this clause must face plainly the fact that they are refusing the benefit under circumstances where there is no questioning the validity of the disability.

The consideration of the first two of the three limitations stated as affecting the application of the disability clause, viz., the time when it comes into operation and the circumstances under which it remains in force has led to an extended discussion of four ways in which the general application of the clause is restricted. They are: (1) the avoidance of the clause by default in premium payments; (2) avoidance by cancellation by the company or automatically through failure to pay the extra premium for the disability benefit; (3) the limitation of benefits to the period during which premiums are payable; and (4) a limitation of the time within which proof of disability will be accepted. If the objections found to these restrictions can be accepted as reasonable then the conclusion follows that the companies issuing such clauses are not acting with the same degree of liberality in connection with the disability clause as they grant in connection with the regular death and endowment benefits under the same policies; and they are following a more conservative course than circumstances justify.

Age Limits

The final limitation placed by most companies upon the use of this clause is one which eliminates its benefits after a certain age has been reached. It has been shown that a broadly worded disability clause covers disability in case of accident or disease. Information is lacking to determine the amount of disability which in the later years of life may be due to disease or to a general weaken-

ing of the vital system. It has been thought advisable therefore by many companies to place an age limit beyond which, if disability occurs, the benefits under the clause will not be allowed. In the actuarial studies, heretofore referred to, disability premiums have been calculated on the assumption that the benefits shall cease in case disability does not occur prior to age sixty or approximately that age. From the standpoint of the insured this limitation may be unfortunate. The man who is looking for disability insurance wants to be protected throughout the entire period of his life. The company, however, can hardly be blamed in view of the present status of our actuarial information, for placing a limitation upon the use of the clause after age sixty. From another viewpoint there is adequate reason for the termination of disability benefits after age sixty. The clause stands as a guarantee that the permanence of a man's insurance will not be endangered by his becoming disabled. But the "insurance" period of life is the period of productivity and that ordinarily does not extend beyond sixty or sixty-five years of age. In other words, by that time the average man retires from active business or professional life and his later years are, or should be, cared for by the accumulations previously made. There is no especial reason, therefore, why disability insurance should cover this later period.

Ninety-four companies out of the one hundred and twenty-seven studied have placed this limit at age sixty. A few instances exist where age sixty-five has been chosen and a few have fixed upon fifty-five. The later age is objectionable and, it is believed, unnecessary, for the actuarial information at hand is sufficient to justify the extension of the limit to age sixty at least, without undue risk. Twenty clauses apply without limit of age, and one extends to age eighty, which is the same for all practical purposes. The latter, the clause of the Fidelity Mutual, matures the policy to which it is attached as an endowment at age eighty. This is an especially worthy feature of this contract and could well be copied by other companies.

Benefits After Age Sixty

Not all companies which limit the use of the clause to some age, as sixty, have left the insured altogether without protection after that time. A number of them have provided an excellent modification

whereby the premiums will be allowed to accumulate as a lien against the face value of the policy *without interest*. In this contingency the contract usually states that loan and surrender values will increase in the same way as though the insured were paying premiums. This in effect charges the lien the same as any indebtedness against the policy except as to the payment of interest on the lien. The New York Life Insurance Company does not permit the premiums to be accumulated as a lien against the policy after age sixty, but instead stipulates that they shall operate to reduce the amount of insurance in force. This provision is more liberal to the insured than the others as is shown by the effect it produces upon loan and surrender values. Under the New York Life method of treating premium indebtedness after age sixty, loan and surrender values are reduced, while the clauses previously enumerated allow these values to increase as before. The contrast in these two methods is shown in case a policy is lapsed after age sixty and its surrender value taken. With the New York Life the premiums paid are deducted from the face value of the policy and the surrender value of this reduced amount of insurance taken. With the other clauses, the surrender value of the original sum insured is taken and from this amount is deducted the premium indebtedness. To put the same statement concretely, assume two policies of \$1,000 face value each, one in the New York Life and one in a company which does not grant the New York Life provision; and assume that each is surrendered after \$100 has been accumulated as a premium lien against it. If the reserve on each policy at the time of lapse is \$200, according to the New York Life clause the \$100 indebtedness will be deducted from the face value of the policy leaving a policy with a face value of \$900, the surrender value of which would be nine-tenths of \$200 or \$180. In the case of the other policy, the surrender value of the \$1,000 policy would be taken, namely \$200, and from that would be deducted the \$100 indebtedness, the insured receiving \$100 in cash in full settlement of the company's liability. In this respect the New York clause is unique and is much more liberal than that of any other company.

CHAPTER VII

BENEFITS GRANTED BY THE DISABILITY CLAUSE—KIND AND AMOUNT OF BENEFITS

Kinds of Benefits

Two types of benefits are given by these clauses, the first one allowing the payment of the premium to be waived without in any way affecting the values granted by the insurance contract. Its main purpose is to enable the insured to keep his insurance in force at a time when his income has been cut off by his inability to follow further the duties of his occupation or profession. The lapsing of his policy at this time might work tremendous hardship and even injustice on the insured. The disability clause circumvents the difficulty by providing, in effect, that the company will pay his premiums for the insured. Most of the actuarial studies of disability have been made with this benefit in mind. The other possibility that is presented is to consider the policy matured and allow its payment in some form to the disabled policyholder. There are undoubtedly many cases of disability where the purposes of insurance to the holder of the contract would be better served by immediate payment of the policy than by merely considering the premiums paid up and allowing its maturity in the regular way at death or as an endowment. Both these types of benefits have been granted by the companies insuring against disability in the United States; in some cases giving one, in some the other, as an exclusive benefit, and in a number of instances granting a choice between the two. Where the policy matures upon disability it is usually paid in one of three forms: in installments, in a single cash sum or as an annuity.

Waiver of Premiums

The waiver of premiums is the benefit upon which attention was first fixed in the United States. To it the actuaries have largely confined their studies; and probably as a result this form of benefit has found most favor among the companies making use of the clause. Sixty-six companies, or approximately one-half the

total number, make the waiver of premium the exclusive benefit; while thirty-five more grant it in combination with other options. The most cursory examination of the clause historically shows that many companies have issued it at first with the waiver of premium benefit alone included and shortly thereafter have revised their clauses so as to make them payable in installments. It is perfectly proper for the companies to act with due care in extending their liability in case of disability and yet it is easily demonstrable that the liability is not increased to unwarrantable proportions by the inclusion of the maturity benefit. The company's risk in case the waiver of premium is allowed is measured by the number of premiums which would have to be paid between the time of disability and the time of death. This period has been found by Mr. Pipe²⁶ to be on the average one year, four months and twenty-eight days among fraternal society risks. An average of two premiums would thus be paid by the company before the policy would regularly mature by death of the insured. If now the full face value of the policy were paid upon disability the added risk of the company would be only the difference between \$1,000 due now and the value now (present value) of \$1,000 due in one year, four months and twenty-eight days. Discount the accuracy of Mr. Pipe's figures as much as you will and the comparison still has not furnished great objection to the granting of a maturity benefit. For if the correct average interval of time between disability and death should chance to be even four or five years in the experience of the old line companies still the liability of the company will be increased only by the difference between \$1,000 and its discounted value for these four or five years. The realization of this situation by the companies concerned partly accounts for the rapid extension of the privilege of installment benefits under the disability clause. Closely allied with this is the important fact that the waiver of premiums does not in most cases meet the difficulty facing a disabled man who has no income with which to continue his insurance, or to take care of himself while in this disabled condition. It is not true that there is no place for the waiver of premium benefit in disability insurance. There are many policyholders who need protection only against the possible lapse of their insurance. But why should it not be possible

²⁶ *Transactions Actuarial Society of America*, Oct. 1909, p. 179.

for a company to grant either benefit, in the same clause or in separate clauses, and then give the insured the privilege of choosing the one best suited to his needs?

Maturity of the Policy

The maturity benefit for disability takes one of three forms: (1) an installment benefit, paying the policy value in ten or twenty payments, or as a continuous installment, that is, a certain number of payments guaranteed with the promise of continuing them, after the number guaranteed have been paid, for so long thereafter as the beneficiary may live; (2) a few companies pay a single cash sum in settlement of all liability under the policy and (3) a few grant a life annuity to the disabled person.

Amount of this Benefit

The amount or the value which this maturity benefit may represent has already been referred to briefly on page 40. If a man will in the average case become a death claim within the short space of one and one-half years after disability has resulted, the company must hold on his policy at the time of disability a reserve based on the probability of his dying in one and one-half years; or, in approximately the same terms, an amount which with interest added for this period between disability and death will equal \$1,000. So upon the occurrence of disability the reserve value of the policy should be very nearly as much as the face value considering the short time the policyholder still has to live. The person who gets the waiver of premium benefit gets exactly this value and any settlement of the contract for a smaller amount of money is not doing justice to the insured. It is to be regretted that none of the actuaries who have made studies of disability has furnished tables comparing the full reserve on a disabled life with the regular American Experience Table reserves in such a way as to make the comparisons suggested in this discussion.

Payment of Policy in Twenty Installments

In the usual type of installment benefit, provision is made for the payment of the face value of the policy in twenty equal annual installments. The present value of these installments of \$50 each,

computing interest at a rate of $3\frac{1}{2}$ per cent, is equal to \$736. Such clauses then require the insured to give up for \$736 a policy which would within a short time mature by death for full \$1,000. Opponents of the disability clause have not sufficiently emphasized this feature, by means of which the company, upon the pretext of granting a benefit, is actually reducing its liability to the policyholder. The payment of the full face value \$1,000 or its equivalent is the thing upon which the insured must ultimately insist. This will make the risk for the company equal to the difference between \$1,000 and the present value of \$1,000 computed according to the probability of death among disabled persons. That this will cost the company more than the ordinary twenty-installment benefit as now given is apparent and it must in fairness be assumed that the insured will be charged more for the greater benefit. And yet there is no reason to doubt that the insured will be ready to pay the higher premium when it is explained that he is getting a contract which gives him all he deserves and no less. Only one company among those granting the twenty-installment benefit has yet attempted thus to treat the insured and that but recently. On October 1, 1913, the Travelers Insurance Company put into operation a new twenty-installment benefit disability contract which pays the equivalent of the full \$1,000 policy. This new clause promises upon disability twenty installments of \$68 each and the commuted value of these payments on a $3\frac{1}{2}$ per cent interest basis is equal to \$1,000.

Payment of Policy in Ten Installments

The ten-installment contracts offer much the same peculiarities as the ones just discussed. One company pays one-tenth of 85 per cent of the face value of the policy. These payments have a present worth of approximately \$736 and the intention was undoubtedly to make the benefit identical in value with the twenty-installment policy. The remaining contracts of this class agree to pay the *face value* in ten equal payments. This is equivalent to \$861 cash. The majority of the ten-payment contracts are therefore more liberal than any others yet discussed with the exception of the Travelers' clause. Several companies have reduced their liability from that here stated, in the case of both ten and twenty payments, by the unfair and unnecessary requirement that the annual premium shall in each case be deducted from the installment to be paid.

Payment of Policy as a Continuous Installment

Continuous installment provisions are found in the contracts of but eight companies. In three instances the payments are made equal to one-twentieth of the face of the policy, to continue for twenty payments certain, and a life annuity thereafter. The "certain" element of this benefit has been shown previously to equal a cash payment of \$736 at $3\frac{1}{2}$ per cent interest. That the life annuity element when added does not materially increase the cost of the benefit to the company is clearly indicated by reference to Mr. Pipe's figures of the average duration of disability before death occurs. The chance that a disabled person will live throughout the payment of the twenty installments is very small. There are a few cases, such as insanity and deafness, where the annuity feature of this benefit will be of immense importance to the individual, and it is because such cases exist that it would be desirable to add the "continuous" element to all ten- or twenty-installment benefits. Two companies allow the insured three different continuous installment options, namely the face of the policy in twenty payments certain; 93 per cent of the face value in fifteen payments certain; or 85 per cent of the face value in ten certain installments. The cash values of these three options, so far as concerns the "certain" element are, reckoning interest at $3\frac{1}{2}$ per cent, respectively \$736, \$739 and \$732. It is apparently the intention of the two companies concerned to put the three options on an equivalent money basis; but the cost of the annuity element in the three cases will be different, for the probability is much greater that the insured will live to collect his annuity after ten years than that he will receive anything on it beyond twenty years; and, furthermore, after the ten certain payments he receives \$85 each year as compared with only \$50 in case of the twenty certain payments. The policyholder who realizes this difference will invariably choose the ten installments and annuity thereafter. Two companies make the amount of each of the twenty guaranteed payments equal to one-twentieth of two-thirds of the amount of insurance. The cash value of this sum is \$491; and the effect of such a provision is that the insured surrenders for \$491 a contract which in the average case will mature in less than one and one-half years for \$1,000. Such a benefit will be accepted by few persons other than those who are in dire need of funds after

disability has occurred. One other clause is the same in principle as this \$491 contract, differing only in the fact that payments are made monthly instead of annually.

Cash Payment

The settlement of a disability contract by payment of a single sum of money furnishes opportunity for direct comparison between actual values given by the various companies and the amounts which may be justly expected. Five companies have promised that in case proof of disability is accepted by the company, *the full amount insured* shall be due and payable to the policyholder. This taken in connection with the facts that two of these companies charge no extra premium for the clause and two charge a flat rate of only 50 cents per \$1,000 insured, and that only one of the five companies places any age limit upon the use of the clause, makes it appear that these companies have granted a most liberal benefit indeed; because this cash value of \$1,000 must be compared with \$736 received in case of the twenty-installment payment or \$861 in case of ten installments. The significance of this liberality is, however, lost when the conditions under which the benefit is granted are further examined. These contracts pay the full amount insured but pay only in case disability is due to accident and then only where the accident has resulted in the loss of both hands, both feet, both eyes, etc., *i.e.*, there are only a few specified kinds of injury which will mature the policy; and it must be remembered that all accidental injuries comprehend but 4.4 per cent²⁷ of the total cases of disability. One company adds a further restriction in the requirement that the injury specified must have been sustained "while riding as a passenger in or upon a regularly licensed elevator or upon a public passenger conveyance provided by a common carrier for regular transportation of passengers." Such a contract as this should not be allowed to parade as disability insurance. One company only among the five under consideration defines disability broadly enough to include all cases of accident. Under the restrictions here enumerated the payment of a benefit equal to the face value of the policy cannot be commended and these contracts are among the most unfair and illusory of all the clauses

²⁷ See page 49.

granted by the one-hundred and twenty-seven companies here studied.

Five companies promise the payment of one-half the face value of the policy in full settlement of the claim upon acceptance of proof of disability. The statement itself is sufficient to show the injustice of thus confiscating the greater part of a policy which will soon mature by death for its full face value. Furthermore the disability benefit will never be used in case the reserve on the policy is greater than one-half the sum insured, since the cash surrender value can be obtained under the regular non-forfeiture provisions. The extension of this benefit throughout the life of the policy without any limitation as to the age of the insured, as is done by three of the five companies, is likewise of no significance since the worth of the benefit ceases as soon as the reserve, based on the American Experience table of mortality, is above \$500. The following table, showing reserves at specified ages computed upon the American Experience mortality basis with a $3\frac{1}{2}$ per cent interest rate, clearly demonstrates how an automatic age limit is thus fixed:

RESERVES ON AN ORDINARY LIFE POLICY

Attained age of insured	Age when policy was issued				
	20	30	40	50	60
50.....	312.60	258.64	166.89		
60.....	478.23	437.28	367.63	240.96	
62.....	512.67	474.42	409.37	291.05	66.00
64.....		511.41	450.93	340.95	131.73
67.....			512.23	414.52	228.66
70.....				485.23	321.81
71.....				507.91	351.70
77.....					519.24

The operation of the reserves, therefore, upon policies issued at ages 20, 30, 40, 50 and 60 automatically sets the age limits, beyond which the disability benefit will be of no avail, at 62, 64, 67, 71 and 77 years respectively. This fact makes unnecessary the provision in one clause that the cash value of the policy may be taken if greater than one-half the sum insured. One company allows a cash

payment after disability equal to the full reserve on a paid-up policy. This reserve equals the net single premium which would purchase the policy computed on the American Experience Table rate of mortality and 3 per cent interest basis. This method would be correct in theory, were the rate of mortality among disabled lives used in computing the reserve instead of the rate among *active* lives; but as it stands it is not as liberal as the provision for payment of one-half the sum insured since in all cases under the ages 62, 64, 67, 71 and 77, in the policies here referred to, the reserve is below \$500. Obviously above these ages the two contracts are on a par. When the reserve on a paid-up policy shall be granted, as computed on a rate of mortality among disabled lives, then, and only then, will the insured obtain a benefit of a financial value equivalent to the waiver of premium benefit so generally available.

Payment of an Annuity

Seven companies only have seen fit to pay disability benefits in the form of an annuity. In the analysis of this annuity two important considerations are presented: (1) the kind of payment, and (2) its amount. One clause guarantees that ten payments will be made regardless of the death of the annuitant previous to their completion, and the annuity will be continued after the ten-year period for only so long as he lives, a table in the policy stating the yearly amount. The other companies, with a single exception, provide for an ordinary life annuity payable during the life of the disabled person; the exception noted granting a five-year term annuity, *i. e.*, payments limited to five in any case and to less than five in event of the prior death of the annuitant. Were there any possible justification for this clause it fails in face of the stipulation that *recovery or the death of the insured before the completion of five payments will terminate the liability of the company.* The five annual installments, were their payment guaranteed, have a cash value of only \$467 and this is accepted in lieu of all other benefits under the policy. \$467 is, therefore, the maximum amount recoverable under this annuity contract and there is great probability that the insured will die or recover before the five payments have been made and that the actual amount received will be much less. The following table is arranged to make easy a comparison of the amount of the annuity paid by each of these companies:

Age	1	2	3	4	5	6	7	Equitable rates (males)
	10 p'm'ts guarant'd	Straight life ann.	Straight life ann.	Straight life ann.	Straight life ann.	Straight life ann.	5 yr. term ann.	Straight life ann.
25....	\$36.00	\$49.04	\$63.00	—	\$50.00	\$10 per mo.	\$100	\$44.55
30....	38.00	51.62	68.00	—	50.00	10 " "	100	46.97
40....	43.00	59.30	77.00	—	50.00	10 " "	100	53.97
50....	51.00	72.72	94.00	—	50.00	10 " "	100	65.72
60....	63.00	97.44	118.00	—	50.00	10 " "	100	86.37
70....	76.00	145.64	—	—	50.00	10 " "	100	124.82
80....	83.00	243.02	—	—	50.00	10 " "	100	182.88

The annuity rates of the Equitable Life Assurance Society are included in this table to furnish a basis for comparison of the annuity granted after disability by these seven companies with the annuity given to a person not disabled. The significance of the comparison lies in the apparent fact that the mortality table on which the disability annuities were computed is the same as that used for computing rates upon annuitants who are not disabled. The statement has been repeatedly made that the rate of mortality among disabled persons is much greater than among active lives. Its truth is demonstrated by the following table taken from Mr. Mead's study of mortality among disabled lives,²³ showing the present value of a payment of \$1 continued throughout the life of the individual, as computed according to different rates of mortality:

INVALIDITY VALUES AT 3½ PER CENT INTEREST

Age	British Friendly Societies	Foresters (Pipe) "select" mortality	Foresters (Pipe) "ultimate" mortality	Maccabees (Mead)	Combined Fraternal Experience (Mead)	American Experience Table of Mortality
20.....	\$4.57	\$4.24	\$2.89	\$2.99	\$6.39	\$21.14
30.....	7.07	6.78	4.73	5.74	8.00	19.61
40.....	8.43	6.83	5.02	6.32	7.38	17.45
50.....	8.52	6.29	4.92	6.39	6.74	14.53
60.....	7.99	5.56	4.80	6.31	6.32	11.03
70.....	6.57	4.93	5.00	5.97	6.04	7.48
80.....	4.03	—	—	4.44	4.44	4.44

²³ Transactions of the Actuarial Society of America, 12:83.

The annuity values, *i.e.*, the present values of \$1 paid annually during life, are very much smaller in the first five columns than in the last, which considers the rate of mortality among active lives; and for all ages until 80, at which time the rate of mortality among disabled risks is generally assumed to be the same as the American Experience rate. The cause for the great discrepancy between the American Experience rates and those in the first five columns is, of course, that disabled persons do not live as long as those not disabled and therefore not as many annual payments are made. The injustice, therefore, of computing invalidity annuity payments on American Experience rates of mortality or of granting annuity benefits that are no more liberal or scarcely more so than payments so computed is apparent. Not an exception exists to this serious charge against the annuity benefits granted under the disability clause.

CHAPTER VIII

BENEFITS (*cont.*)—EFFECT OF INDEBTEDNESS, DEATH OR RECOVERY ON THE POLICY

The presentation of the facts regarding the kind of benefits granted under the disability contract and the amount of value obtained in each case does not enable one to predict the final results that may obtain from the existence of this clause in a life insurance policy. There are four circumstances under which one or more of the benefits here described may be greatly modified. The existence of indebtedness on a policy which is payable in installments after disability may considerably affect the amount of these installments; the death of the insured before the completion of installment payments raises the question whether they will be continued and what settlement will be made in case they are not; the recovery of the insured from his supposedly permanent disability necessitates a similar decision with respect to the reinstatement of the policy and the premiums to be paid thereafter; and finally there remains the significant question, affecting the disability clause in participating contracts, whether the insured is to receive or to forfeit his dividends after disability has occurred.

Indebtedness Deducted from Face Value or from Commuted Value

When a policy is encumbered with liens at the time of disability of the insured it is important to know how this indebtedness will affect the amount of the installments to be received. The majority of clauses provide that it shall be deducted from the face value of the policy and one-twentieth or one-tenth, as the case may be, of this reduced amount be paid in each installment. By this method of treatment the liens against the policy are at once wiped out. In effect the policy becomes matured for its face value; and the company then deducts charges against it and begins payment of the remainder in installments. Five companies have followed a plan of reducing the amount of each installment in the proportion which the indebtedness bears to three-fourths of the sum insured. The effect of this scheme is to penalize the insured for having borrowed

on his policy by reducing his disability benefit. To illustrate: in case a policy has a lien of \$250 standing against it, by this method each installment will be reduced in the proportion which \$250 bears to \$750, or one-third making each of the twenty installments equal to \$33.33. By the more usual method, as first stated, each payment would be reduced in the proportion which \$250 bears to \$1,000, or one-fourth; in this case the insured would receive annually upon his \$1,000 policy \$37.50 as compared with \$33.33 in the previous instance. This method of treatment is justified by the explanation that the insured is promised, not the face value of the policy, but only the commuted value of the face amount paid in installments and it is further explained that the policy is thus immediately cleared of its indebtedness instead of letting the latter be spread over the life of the twenty payments. It will be recalled (page 64) that serious objection was found to the maturity of a policy for the commuted value only of the sum insured paid in installments; and this penalty but adds one more charge against such clauses. If, as was earlier intimated, the development of the disability clause lies in the direction of granting as large an installment benefit as can be purchased by the face value of the policy at the time of disability, then this method of penalizing policy loans will have no reason for further continuing. The companies adopting this practice contend that there is theoretic justification for charging indebtedness in this way against the cash value of the policy, since on the maturity of the insurance the loans must be paid before any further benefit can be obtained. Just as good reasons can be advanced however for considering that the policy is not fully matured until it becomes a death or an endowment claim. In this case the charging of indebtedness according to the above method is equivalent to requiring that the loans must be paid at once in order that the insured may obtain any benefit for disability. Loans, when granted, are made payable at a fixed time or at the option of the borrower; but here a new scheme is introduced by which the company requires the immediate payment of the loan as a prerequisite to the receipt of disability benefits.

Reduction of Number of Installments

A few companies have arranged the disposal of indebtedness against the insurance in such a way as not to interfere with dis-

ability benefits, by deducting any loans from the face value of the policy while at the same time making the installments paid for disability equal to one-tenth or one-twentieth of the sum insured. The effect of this is to reduce the number of installments that will be paid and the loan does not affect the disability benefits until the policy value has been completely exhausted. There is a further result from the fact that the indebtedness now continues to stand as a lien against the policy, and since liens are secured by the reserve on a policy, the reduction of the amount of insurance in force by payment of installments will gradually reduce the reserve on the policy until it is below the amount of the lien. The New York Life clause is the only one which has attempted to care for this contingency. It provides that, whenever any installment becomes payable and there is an indebtedness on the policy in excess of the cash surrender value of the reduced amount of insurance, the company shall apply such part of the installment as may be necessary to reduce the indebtedness to the amount secured by the cash surrender value. The operation of this provision can best be shown by a simple illustration. Suppose an ordinary life policy is issued at age 30, the insured becoming disabled at age 50 and the New York Life beginning payment of his \$1,000 policy in annual sums of \$100 and suppose an indebtedness of \$200 stands against the policy. The annual payments reduce the insurance in force each year by \$100 and the following table shows the application of indebtedness under this agreement:

Attained age	Payments made to policyholders	Insurance in force	Reserve per \$1,000 insurance Am. Ex. 3%	Reserve on insurance in force	Indebtedness against policy
50.....		\$1000	\$276	\$276	\$200
51.....	\$100	900	293	264	200
52.....	100	800	311	249	200
53.....	100	700	329	230	200
54.....	100	600	347	208	200
55.....	100	500	365	183	200
56.....	100	400	383	153	200

By the time the fifth annual payment is made to the insured the reserve on the insurance then in force is reduced to \$183 and the debt against the policy is \$200. By the terms of the agreement \$17

would be taken from the fifth yearly installment and applied in reduction of the lien to \$183. The debt now stands at the exact amount of reserve on the policy but this does not cancel the contract; for, in case the policy matures by death before the next payment is due, its value to the beneficiary will be \$1,000 less the five payments made and the indebtedness of \$183.

Two cases exist where the insurance company requires all indebtedness to be paid up before the installments begin. It is probable that the lien would be reduced annually by the amount of the payment until it was finally extinguished. This plan is unwise for, if the insured has any reason for choosing installment payments after disability, it is because he will have urgent need for his insurance money *at once*. One company apparently seeks to evade payment of disability benefits entirely where indebtedness exists against the policy since it agrees to pay them "if there be no indebtedness."

No Provision for Indebtedness

In a considerable number of clauses no reference has been made to this important subject and its omission is one which may result in grave consequences to some of the parties concerned. The difficulty of dealing properly with policy loans after disability is apparent after the numerous methods are considered by which the companies attempt to cope with the problem, and the necessity, likewise, of having to face the problem grows greater with the continued extension of their loan privileges by companies, as a result of competition or legislative enactment. The growth of loans on insurance policies since 1906 has been one of the most startling of recent developments in life insurance.

Effect of Death

The death of the insured before the policy has been completely paid to him in installments raises the question whether the payments will continue as before and, in case they are not continued, the kind of settlement that will be made. The majority of the clauses that deal at all with this situation assume that a policy once matured by disability is not affected by death and continue to pay annual sums until the promised number are completed. Four companies grant a further option to the beneficiary of receiving the

commuted value of the remaining installments, computed at 3½ per cent interest. One company *requires* that the commuted value be taken and discounts the future payments at 6 per cent, instead of 3½. This is unnecessary, and it only adds one more charge against a particular clause which has very little to commend it to the insuring public. Since the companies have penalized the insured by making him take a smaller cash value upon disability than at death merely in order to obtain insurance benefits at once, they should now, to be consistent, grant his beneficiary the privilege, at death, of reinstating the policy and removing the penalty. A number of companies have done this by the excellent provision in their clauses that the unpaid balance of the face of the policy will be immediately available at the death of the insured—the insurance in force at any time is equal to the amount of the policy less any payments that have been made. One company charges interest on installments paid in case the policy is so matured by death; in this instance a rate of 5 per cent. This company may well be classed with the one above which commutes the remaining installments at 6 per cent.

Effect of Recovery

The disability clause proposes to pay benefits only in case the insured has become *totally and permanently* incapacitated and the more carefully framed contracts provide that proof of disability may be required by the company, or state that benefits will be paid only so long as the disability remains total and permanent. There will undoubtedly be a few cases in the experience of companies dealing with this risk where supposedly permanent disablement will turn out to be temporary only and the question will then arise as to what shall be done with the benefits already paid. In case the waiver of premiums is the sole benefit there are two courses which the company may follow: the insured may be required to resume the payment of premiums from the date of recovery with no penalty attached because the disability did not happen to be permanent, or the premiums paid by the company can be charged as a lien against the policy. It speaks well for the liberality of insurance companies generally that the first method is the one chosen in most cases. The few cases where the second is used (and in these cases five or six per cent interest is always charged on these liens) are found in

clauses of the most undesirable kind, clauses containing many of the objectionable features already referred to. One company even goes to the extent of requiring the resumption of premium payments "if the insured shall recover *or has the ability to pay.*" Recovery from disability offers greater difficulties where the policy is being paid in installments than where the waiver of premiums is the only benefit. The better class of clauses meet the situation by a provision, to which attention was called in discussing the effects of death upon disability benefits (page 75) by the terms of which the amount of insurance in force is at all times equal to the amount of the policy less any payments that have been made.

The recovery of the insured from disability, however, brings up a question not to be met with in case of death, namely, what will be the amount of the premium to be paid on the policy henceforth? It is scarcely right, for instance, that the insured shall continue to pay the same premium in case of recovery after half the sum insured has been paid to him by the company that was paid when he still had the full face value of the policy available at death. Very few companies state specifically that premiums will be reduced after recovery proportionately to the reduction in the insurance in force but most of them provide that the payment of any benefit for disability will proportionately reduce the loan, surrender and *other* values. Possibly "other" values include premiums—there is no direct way of determining. Two companies, with a liberality which can scarcely be justified, fail to charge the installments paid before recovery as an indebtedness against the policy, and agree to pay the full face value of the policy at death. One of these companies charges no extra premium for the benefit, the other charges fifty cents per year. The liberality in one case at least is lessened by the requirement that from the amount of each installment paid during disability is to be deducted the amount of the regular premium. This far overbalances the recovery benefit, for from the regular installment of \$50 paid on an ordinary life policy issued at age twenty-five there would be deducted a premium of about \$20. With this very material reduction of the installment by two-fifths must be contrasted the liberal benefit in case of recovery, at the same time keeping in mind the fact that cases of recovery will be rare and that the company's liberality will not occasion it any considerable expense.

Reinstatement of Original Policy

The most objectionable of all methods of dealing with recovery from disability is found in the contracts of sixteen companies. Differing in detail, they all subscribe to the general outline of a plan the most stringent form of which is as follows: The policy may be reinstated after recovery upon (1) the insured passing a medical examination to show his insurability; (2) the repayment to the company of (a) all installments received; (b) all arrears in premiums, and (c) compound interest on both at five or six per cent. In some instances the insured is given an option of letting this sum stand as a lien against his policy, with interest annually, and subject to all the loan requirements of the contract—a meager substitute indeed for one of the most unnecessary and unworthy features found in one hundred and twenty-seven disability contracts.

CHAPTER IX

PAYMENT OF DIVIDENDS AFTER DISABILITY

The fourth and last modification of the benefits paid for disability arises in connection with the payment of dividends on participating policies. The question of dividends may arise in connection with the waiver of premium benefit or where a policy is being paid in periodic installments.

Dividends after Waiver of Premiums

Eighty-seven companies out of one hundred and one which grant the waiver of premium benefit have made no mention of dividends. Some of these companies issue only non-participating policies, hence the question of dividends cannot arise, but the greater share of them write participating insurance. An illustration will clearly demonstrate the importance of this question. In the year 1910 the Mutual Benefit Life Insurance Company paid upon an ordinary life policy issued upon a risk thirty-five years of age in 1859 an annual dividend of \$20.62. The annual premium which the insured was paying was \$27.50 making the net cost to the insured for the year \$6.88. If the Mutual Benefit Life Insurance Company were granting the disability clause on such a risk, the question of dividends might well be of more concern to the policyholder than the disability benefit itself. It is clearly apparent that the instance given is an unusual one but it was chosen in order to bring out the extreme significance of this consideration. The greater portion of disability by far occurs at an advanced age because of disease or general age disability and there are many policies with an initial annual premium of \$20 to \$25 on which dividends of six, eight and ten or more dollars are paid after the policies have been in force over twenty years. Will the company then be permitted to confiscate these dividends in case the insured becomes disabled? Eighty-seven companies make no mention of dividends and the failure of their contracts to make any provision constitutes a weakness and opens the way for misunderstandings in the future.

Any other procedure than that of granting dividends to the insured during the time while premiums are waived is unfair and should not be permitted by state insurance departments. The actuaries who have computed rates for the waiver of premium benefit have based their calculations on the assumption that the initial premium charged is to be waived. And they have demonstrated that the waiver of the entire premium does not require an unusually heavy extra premium. If that initial premium contains a sufficient margin for the company's safety and the company contracts to return the overcharge in the form of a dividend, then there is no justification for any plan whereby the company confiscates the overcharge after disability occurs. Four of the thirteen companies referring to dividends in their clauses explain that dividends are to be discontinued.

Only nine companies of the total 101 permitting waiver of premiums agree to pay dividends after the insured becomes disabled. The Columbus Mutual states that "the policy becomes paid up for its full amount "participating in profits"; the policy of the Reliance Life "shall participate in any distribution of surplus"; the Mississippi Valley Life policy "will be credited with dividends in like manner as if the insured paid the premiums"; the policy of the Sun Life of Montreal "shall continue to participate in profits"; the Texas Life provides that "the policy will continue in full force towards maturity *sharing in the profits of the company among policies of its class*"; the contract of the North State Life is to continue in full force as a "paid-up participating policy for its value"; the Franklin Life stipulates that "waiver of premium payments shall have the effect of providing the same values and benefits as though premiums waived had been paid"; the waiver of premiums by the Home Life of New York, "shall not affect the right of the insured to any dividend or other benefit"; the Germania Life requires that dividends after disability "shall be paid in cash." Since the rate of mortality among disabled persons is so much greater than among active lives it is not equitable to the company, or to its other policyholders, to permit the disabled person to use his dividend to purchase a paid-up addition to the policy since this paid-up addition is computed on the American Experience table rate of mortality. The requirement of the Germania Life that dividends be paid *in cash* after disability is, therefore, one which might well be copied.

Dividends after Maturity of the Policy

Dividends on a policy after its maturity will not be computed on the same basis as before since two elements which are largely instrumental in producing the surplus fund from which dividends are paid, viz., savings in expense and lower mortality than expected, are in no way affected by a policy once matured. It is not surprising therefore to find that only one company makes any reference to the payment of dividends on deferred installments, this company stating that in case the twenty-installment benefit is chosen no dividends thereafter will be paid. There is, however, a further element, and a very important one, contributing toward the fund from which dividends are derived, viz., excess interest earned on the company's assets above the rate assumed in calculating premiums. Practically all the companies today compute premium rates on a three or three and one-half per cent interest basis, while many of them earn four, four and one-half or even five per cent on their assets. If a company has earned four and one-half per cent on its assets, but has computed its rates on a three and one-half per cent basis, this extra one per cent has been contributed by the assets as a whole, and a proportionate amount of it in justice belongs to every policyholder who has a claim on the company's funds. The disabled person, whose policy has matured for \$1,000 payable in twenty installments is assumed by the company to have a policy worth \$736 in cash, using a three and one-half per cent interest basis in discounting the installments. If the company, however, has earned four and one-half per cent interest the policyholder has a valid claim on the extra one per cent on that part of the \$736 still in the company's possession and he is being treated unfairly if the company uses that income to swell the dividends on policies not yet matured. As stated above, the practice of so using surplus interest is followed by all the companies today in connection with their disability contracts in cases where "maturity" benefits are promised. The most equitable contracts issued today pay this excess interest where policies matured as death claims or endowments are being paid to beneficiaries in installments. This practice should be required of all companies and should be extended to cover installment payments under the disability contract.

CONCLUSION

The foregoing study makes possible a statement of some of the factors that should govern the future development of the disability clause. It has been found that the main motive back of its rapid rise to popular favor is commercial—a constant need of the solicitor for a new feature, a “talking point,” and the keen appreciation on his part that the disability clause furnishes it. It has been further shown that the risk of total and permanent disability is a real and tangible one and that its occurrence may easily endanger the permanence of one’s insurance. The idea of furnishing a real insurance feature has prompted the issue of the clause in many cases. These two motives, the altruistic and the commercial, have combined in bringing into existence a multitude of clauses, some good, some worthless, and some a curious admixture of the good and the bad. The business motive has led some companies to adopt clauses for no other purpose than to meet competition and the results are a disgrace to American life insurance; while other clauses show that they have had behind them the very best of careful and thoughtful consideration of the problems involved. It is plain that we have as yet no adequate knowledge of this risk in its relation to life insurance and we must permit the companies to go slowly in making the clause all that it should be, lest they make a mistake in the direction of too great liberality. Such a false step might only destroy the progress thus far made.

Three fundamental criticisms can be brought against the majority of disability clauses now issued: (1) the definition of disability; (2) the benefit given; and (3) restrictions under which the clause is granted. One way of meeting these criticisms is to frame a clause embodying in it all those features which are desired and which the present study has found to be safe. But this plan has inherent defects. In the first place, the same circumstances do not exist with every company—one writes participating insurance, another does not, the question of dividends being important in the first instance and never arising in the second; one company charges a premium for the clause, another pays the costs out of surplus, the first having need of a cancellation clause, the second not—and so in many instances the differences in method require a corresponding difference in the provisions of the disability clause. The

desirability, therefore, of attempting to frame a clause for general use is questionable. A second objection that faces the writer is the difficulty of obtaining a clause that would meet all the legal requirements of various companies. Equally satisfactory results can be obtained by laying down certain principles that should be embodied in every contract, and leaving it to the companies themselves to frame their clauses with these principles in mind.

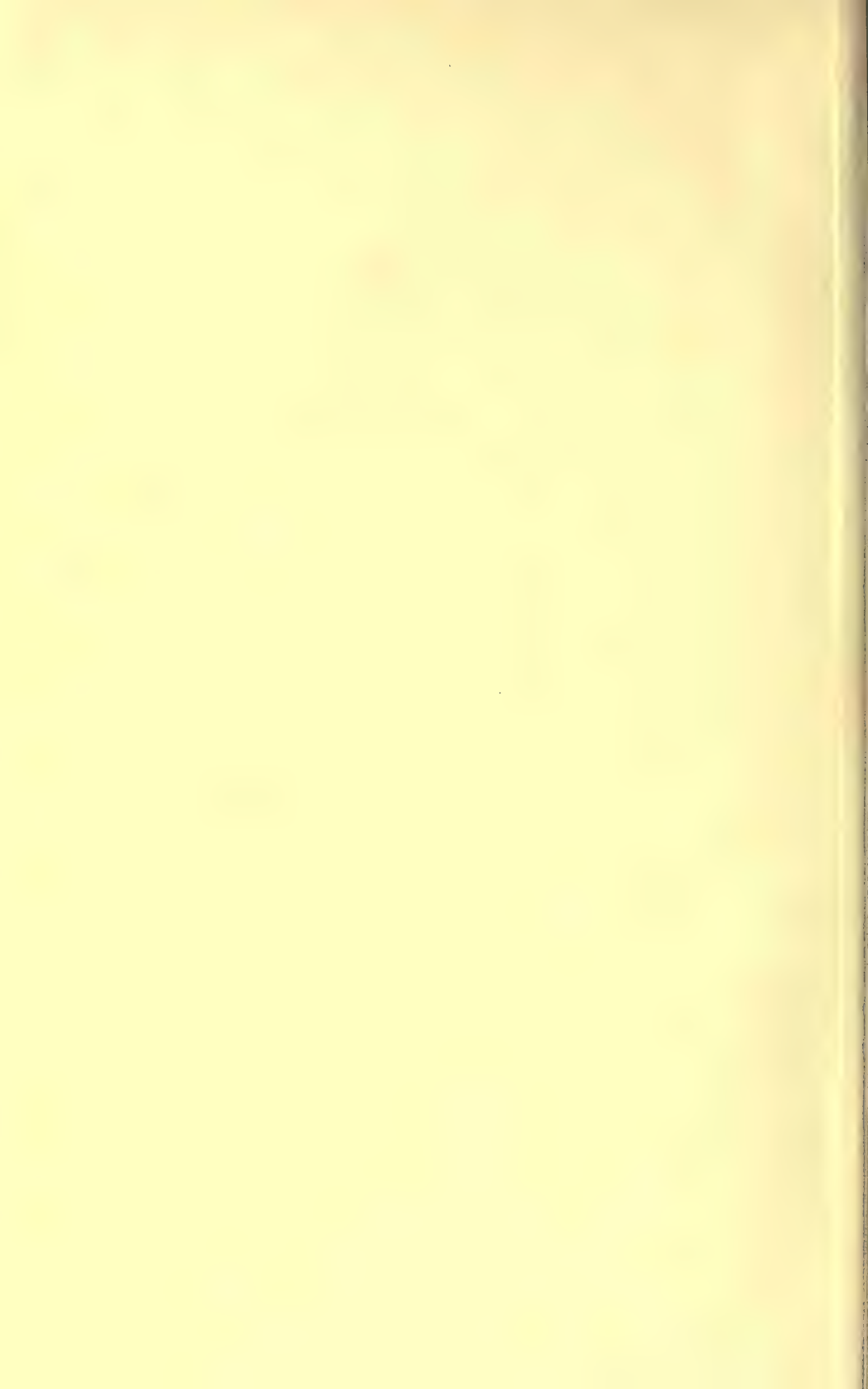
The three points at which the disability clause is especially open to criticism are stated in the preceding paragraph. Disability is defined by all clauses today as inability to perform the duties of *any* occupation for gain or profit. It should be defined with reference to the particular occupation in which the insured is engaged. The life insurance companies should note that it is so defined today by some companies issuing accident and health policies. Benefits should furthermore be paid for disability *due to any cause whatever* where fraud is not present. The restrictions now existing in many clauses whereby only a limited number of cases of disability are covered should be completely done away with.

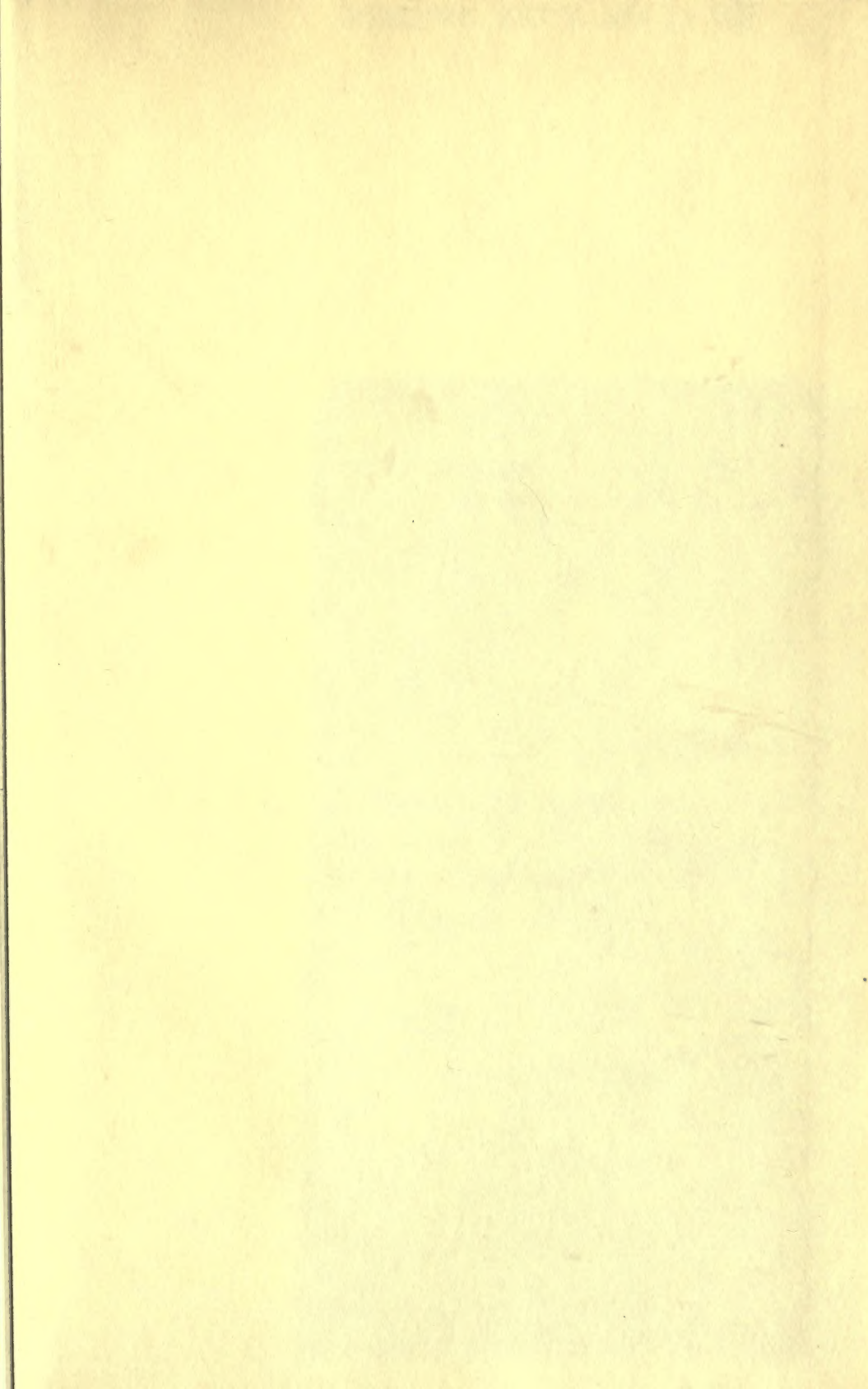
In the second place the benefit given after disability should in no case be less in money value than the insured would receive could he continue his insurance in force until death; and he should have the option of choosing between a "maturity" benefit and mere waiver of premiums. If the maturity benefit is not the full equivalent of the face value of the policy it should in no case be of less value than the waiver of premium benefit—and the latter will be equal to the present value of the sum insured computed on the basis of the mortality rate existing among disabled lives. Furthermore disability benefits should always be fully participating where the main policy is participating and dividends should be paid to the insured after as well as before disability.

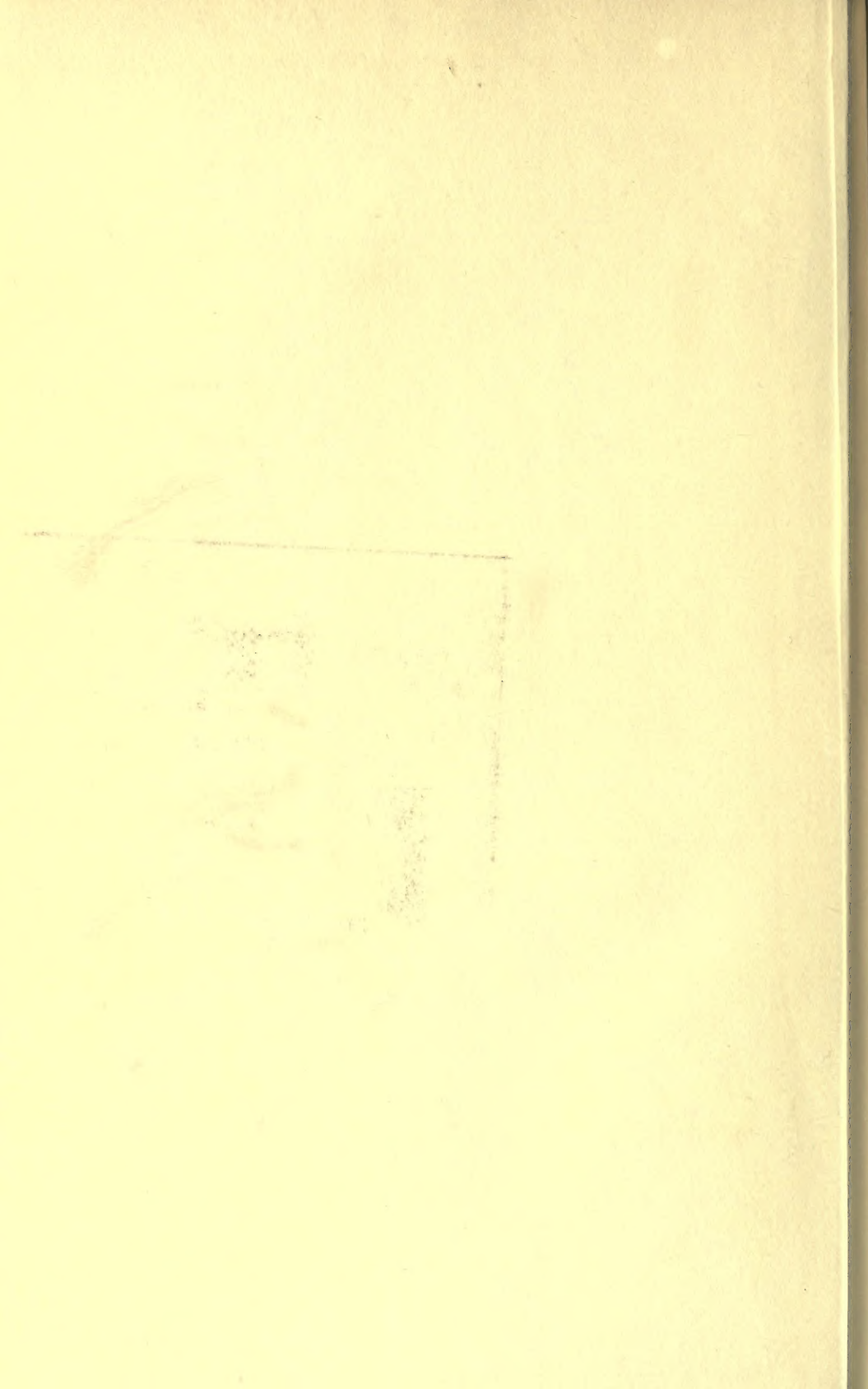
The third feature which every clause should embody should grant disability benefits with the same restrictions as are made in case of the regular benefits under the policy. The many restrictions now found in clauses regarding the lapse of disability benefits through default in premiums, limitations on the time for making proofs or restrictions of benefits to the premium paying period, etc., have no right to continue. These remarks, of course, do not apply to such cases as fixing an upper age limit beyond which benefits will not be allowed, ample justification for which practice has been

found. It is evident, if these criticisms can be accepted, that there is yet opportunity for the life insurance companies to issue a disability clause which is a real "selling feature" and one which will meet competition because of its intrinsic merit as an insurance measure.









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